

# GM 70694

The Sakami property, la grande subprovince, James bay territory

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Form 43-101F1  
Technical Report  
Effective Date: April 30, 2017  
Issue Date: October 10, 2017

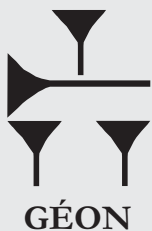


**The Sakami Property,  
La Grande Subprovince,  
James Bay Territory,  
Quebec, NTS 33F07,08,09,10**

**GENIUS PROPERTIES LTD.**



*Camp Abalor on the bank of the Sakami Lake, James Bay area, Quebec.*



**Michel Boily, PhD., geo.**

**CERTIFICATE OF QUALIFICATIONS  
DATE AND SIGNATURE**

I, Michel Boily, Ph.D., P. Geo. HEREBY CERTIFY THAT:

I am a Canadian citizen residing at 2121 de Romagne, Laval, Québec, Canada.

I obtained a PhD. in geology from the Université de Montréal in 1988.

I am a registered Professional Geologist in good standing with l'Ordre des Géologues du Québec (OGQ; permit # 1097). I have practiced the profession of geologist for the last 39 years.

I had the following work experience:

From 1986 to 1987: Research Associate in Cosmochemistry at the **University of Chicago**, Chicago, Illinois, USA.

From 1988 to 1992: Researcher at **IREM-MERI/McGill University**, Montréal, Québec as a coordinator and scientific investigator in the high technology metals project undertaken in the Abitibi greenstone belt and Labrador.

From 1992 to present: Geology consultant with **Geon Ltée**, Montréal, Québec. Consultant for several mining companies. I participated, as a geochemist, in two of the most important geological and metallogenic studies accomplished by the Ministère des Richesses naturelles du Québec (MRNQ) in the James Bay area and the Far North of Québec (1998-2005). I am a specialist of granitoid-hosted precious and rare metal deposits and of the stratigraphy and geochemistry of Archean greenstone belts.

I have gathered field experience in the following regions : James Bay, Quebec; Strange Lake, Labrador/Quebec; Val d'Or and Rouyn-Noranda, Quebec; Grenville (Saguenay and Gatineau area); Cadillac, Quebec; Otish Mountains, Quebec, Lower North Shore, Quebec, Sinaloa, Sonora and Chihuahua states, Mexico, Marrakech and Ouarzazate, Morocco, San Juan, Argentina and Nicaragua

I am the author of the 43-101F1 Technical Report entitled : "The Sakami Property, La Grande Suprovince, James Bay Territory, Quebec, NTS 33F07, 08, 10" written for GENIUS PROPERTIES LTD. with an effective date of April 30, 2017.

I consent to the filing of this report with any stock exchange and any other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public.

As of the date of the certificate, to the best of my knowledge, information and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" (QP) for the purposes of NI 43-101.

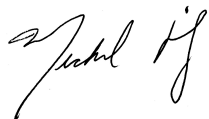
The Qualified Person, Michel Boily, has written this report in its entirety and is responsible for its content.

I read the National Instrument 43-101 Standards of Disclosure for Mineral Projects (the "Instrument") and the report fully complies with the Instrument.

I am an independent qualified person, QP, according to NI 43-101. I have no relation to GENIUS PROPERTIES LTD. according to section 1.5 of NI 43-101 and thus I am independent of the Issuer. I am also independent of the Vendor ABALOR MINERALS INC. I am not aware of any relevant fact which would interfere with my judgment regarding the preparation of this technical report.

As of the effective date of April, 30 2017, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the report not misleading.

I wrote assessment reports on the Sakami property on behalf of Abalor Minerals Inc.



Michel Boily, PhD., Geo.  
Dated at Montréal, Qc  
April 30, 2017



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## ITEM 1 SUMMARY

The Sakami property, located in the James Bay area of the Province of Quebec, straddles the structural contact between the Opinaca and La Grande Archean subprovinces which exposes a significant number of gold showings related to sulphide-rich quartz veins in iron formations and shear zones. The property consists of two distinct blocks of 128 non-continuous mineral claims totalling 6,574 ha or 65.7 km<sup>2</sup> which are 100% owned by Genius Properties Ltd. The latter acquired a 100% interest in the Sakami property from Abalor Minerals Ltd.

The La Grande subprovince is an EW-oriented Archean volcano-plutonic assemblage composed of an ancient tonalitic basement, several westward-younging volcano-sedimentary greenstone belts and of multiple ultramafic to felsic intrusions whereas the Opinaca Subprovince exposes several injections of white-pink monzogranites and pegmatitic monzogranites in a vast assemblage of metamorphosed sediments assigned to the Laguiche Group.

The Sakami property displays diverse lithologies showing signs of alteration and/or gold mineralization (Au = 1 to 5 g/t) principally associated with mylonitic or sheared zones. Exploration work carried out by Abalor during the 2011 and 2012 summer seasons started with the establishment of gridlines in the southwestern and northeastern (Sipanikaw) sectors of the property. Grab rock sampling along the Sipanikaw gridlines yielded several lithological types; the most interesting being sericitized, oxidized or brecciated volcanic rocks and schists containing sulphide. Of the rock samples collected, eighteen (9 %) display gold values > 100 ppb, with four rock specimen with significant concentrations (0.90 to 1.42 g/t Au). A humus sampling campaign was conducted on the southwestern grid. Gold assay results indicated 11 samples (2 %) display concentrations greater than 0.020 g/t (0.020 to 0.552 g/t), with three humus specimen having significant concentrations (0.102 to 0.552 g/t Au). Overall, the geochemical contour maps, define two “anomalous zones” which are characterized by clusters of gold values > 0.020 g/t Au.

The author recommends performing a magnetic survey on the Sipanikaw gridline which will easily identified the high magnetic signature of the iron formations and the trace of the various shear zones. In the southeastern part of the Sakami property, the author proposes a ground-based

mag survey along the refurbished gridlines used for the humus sampling campaign. Both surveys aim to define drilling targets. If Phase I of exploration is successful (\$361,342), Genius Properties should consider implementing a 1,500 m drilling campaign to test these targets. The drilling cost is estimated at \$455,070.

## **ITEM 2 INTRODUCTION AND TERMS OF REFERENCE**

On April 4, 2016, Genius Properties Ltd. mandated Michel Boily (Geo, PhD) to write a 43-101F1 Technical Report on the Sakami property located in the James Bay area of Quebec, Canada. The Sakami property constitutes a property of merit for Genius Properties Ltd. The purpose of this report is to describe the geological, structural and metallogical characteristics of the property and summarize the recent exploration work carried out in 2011 and 2012. This report will also comply with the CSE regulatory requirements and follow the guidelines and framework defined in the Form 43-101-F1 pertaining to National Instrument 43-101 “Standards of Disclosure for Mineral Projects”. Finally, the report will support the technical disclosures by Genius Properties Ltd. in its Annual Information Form. The study is based on in-house reports and documents obtained from Abalor Minerals and other documents (assessment reports and geological reports) and maps acquired from the Ministère de l’Énergie et des Ressources du Québec SIGEOM website. The majority of these reports were prepared after the implementation of NI 43-101 norms and for the most part followed the accepted rules and procedures. The author believes the information provided in these reports is verifiable in the field, and portrayed a reasonable representation of the mineralization.

The author has relied upon a limited amount of correspondence, pertinent maps and agreements information that described the MOI into Genius Properties Ltd entered into the Sakami project. The author has also reviewed the claim titles forming the Sakami property owned by Genius Properties Ltd and found that they were in good standing. The author does not accept any responsibility for errors pertaining to this information.

Units presented in this report use the metric system. Precious metal concentrations are given in grams of metal per metric ton (g/t) or in parts per million metal (ppm). Tonnage figures are in dry

metric tons unless otherwise stated. Currency units used are the Canadian Dollar (\$CAD). The weight and the measurement which are used in the course of this study are in conformity with the nomenclature of the international system (IS).

Due to the weather condition prevailing at the Sakami site during the winter of 23016-2017, the author was unable to perform a property visit (43-101 CP Part 6.2.2 b). The author will travel to the property during the summer of 2017 when the road conditions will provide complete access to the property.

### **ITEM 3 RELIANCE ON OTHER EXPERTS**

There is no reliance on other experts.

### **ITEM 4 PROPERTY DESCRIPTION AND LOCATION**

The Sakami property is located in the James Bay area of the Province of Quebec and contained entirely within the 33F07 NTS sheet (Figures 1, 2 and 3). The core of the property claims is positioned 14 km directly south of the Trans-Taiga Road, a 765 km gravel road linking the town of Radisson to the Caniapiscou Reservoir to the extreme east. Radisson (pop. 350) is 75 km as crow fly from the property. The property overlies island and shore areas of the northeastern Sakami Reservoir (Figure 4). It consists of two blocks of 168 non-continuous mineral claims totalling 6,574 ha or 65.7 km<sup>2</sup> (Appendix 1). The claims are 100% owned by Genius Properties Ltd. The Sakami property was staked through the GESTIM website run by the Ministère de l'Énergie et des Ressources du Québec by Mr. Luc Lamarche (P. Geo) on behalf of Abalor Minerals Inc. UTM coordinates and grid contours on the geological maps are extracted from the information given on the GESTIM website.

According to Quebec government records, no part of the land covered by the property is a park or mineral reserve. The property is devoid of royalties, back in rights, payments or other encumbrances. The Issuer does hold the claim titles of the Sakami property. The Sakami property is not subject to environmental liabilities except for those specified in the “Loi sur les Mines” (L.R.Q. chapter M-13.1). Mining exploration is currently permitted on the entire surface.

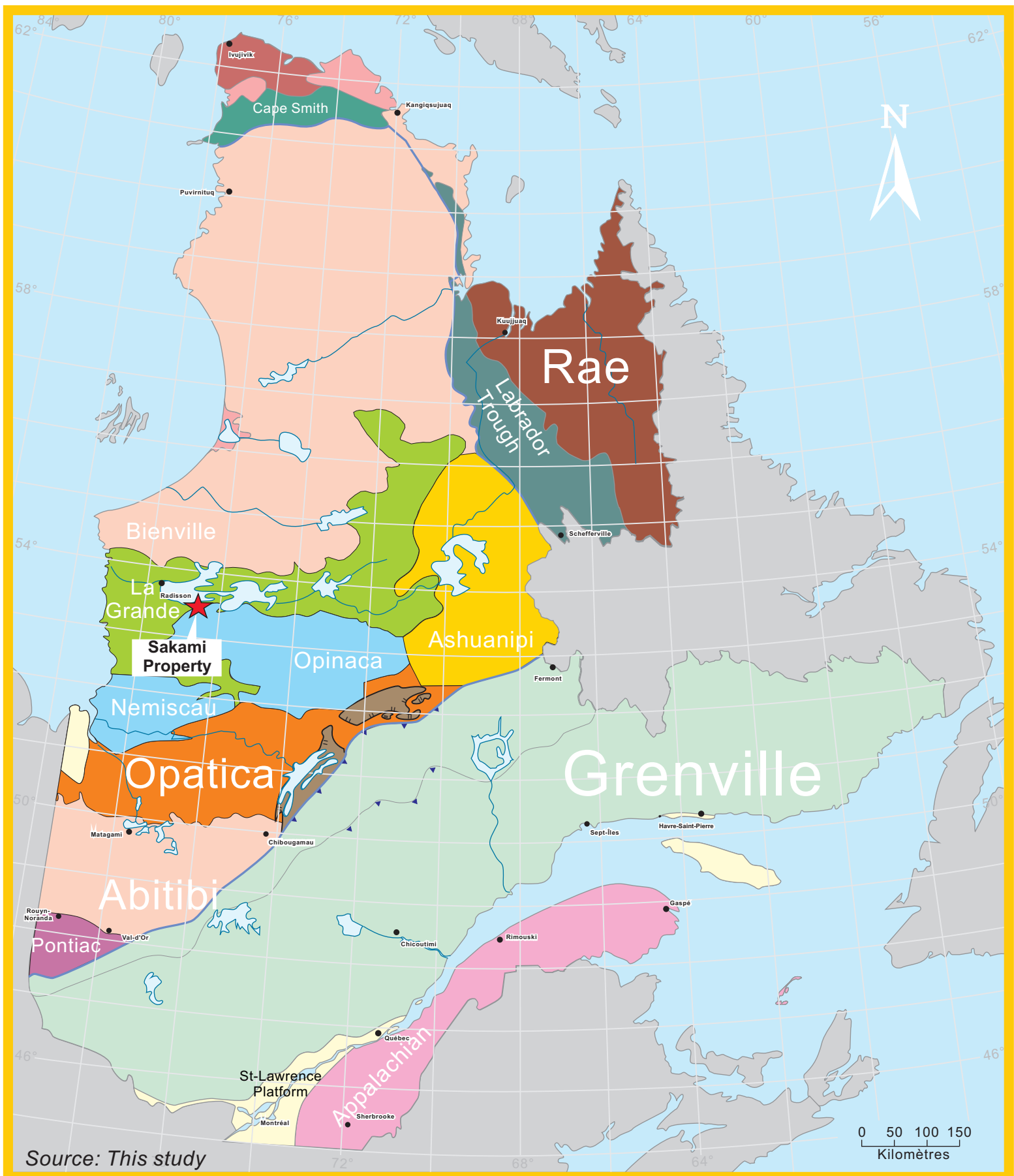
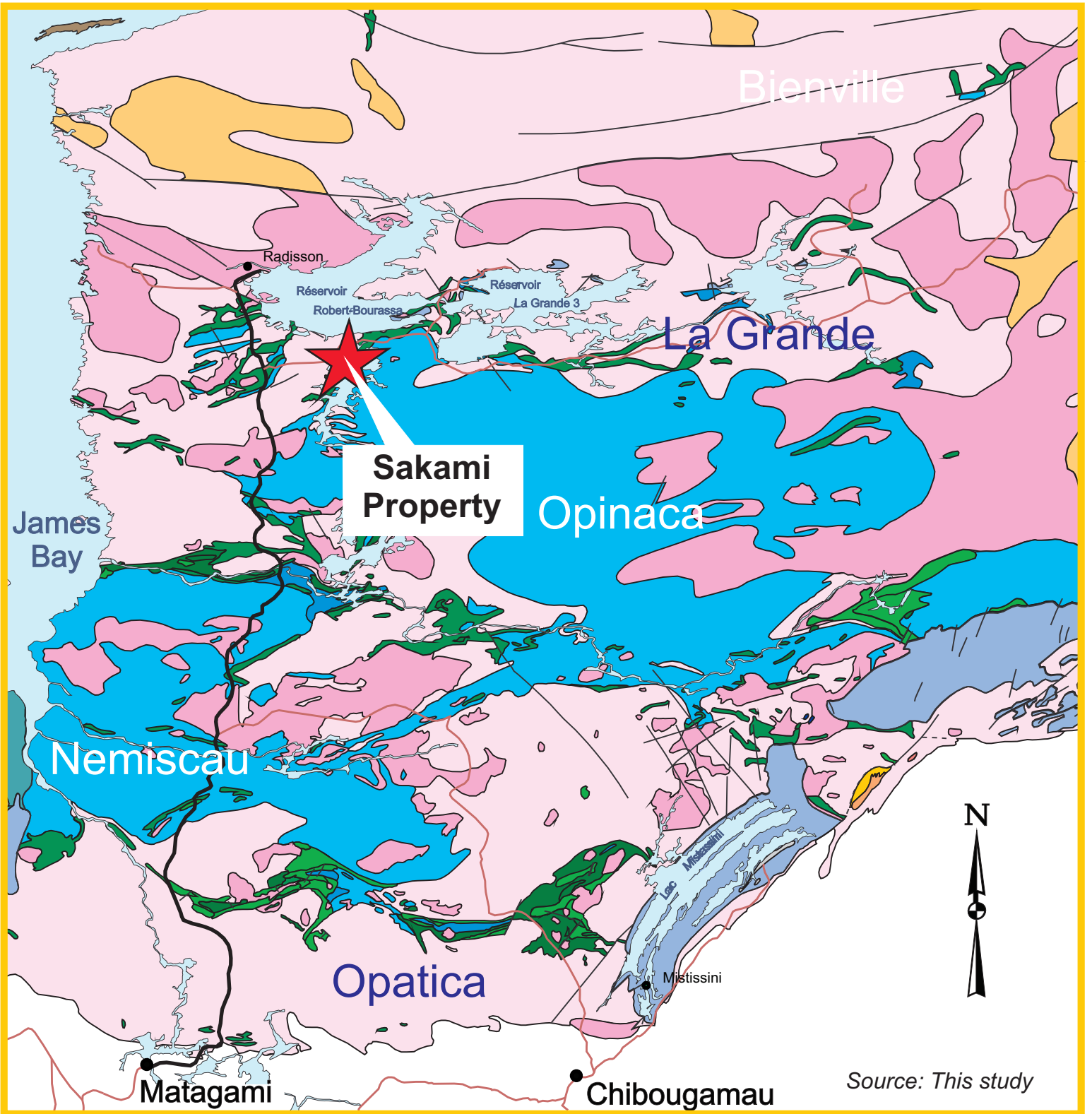




Figure 1. Geological map of illustrating the different geological provinces and subprovinces and the localization of the Sakami property.



**Paleozoïc**

 Sedimentary Rock


**Proterozoïc**

 Clastic and dolomitic sedimentary rock

**Archeaen**

 Granitoid and paragneiss

 Paragneiss

 Volcanosedimentary rock

 Granulitic rock


 Tonalite and tonalite gneiss

Figure 2. Geological map of the James Bay area showing the location of the Sakami property.

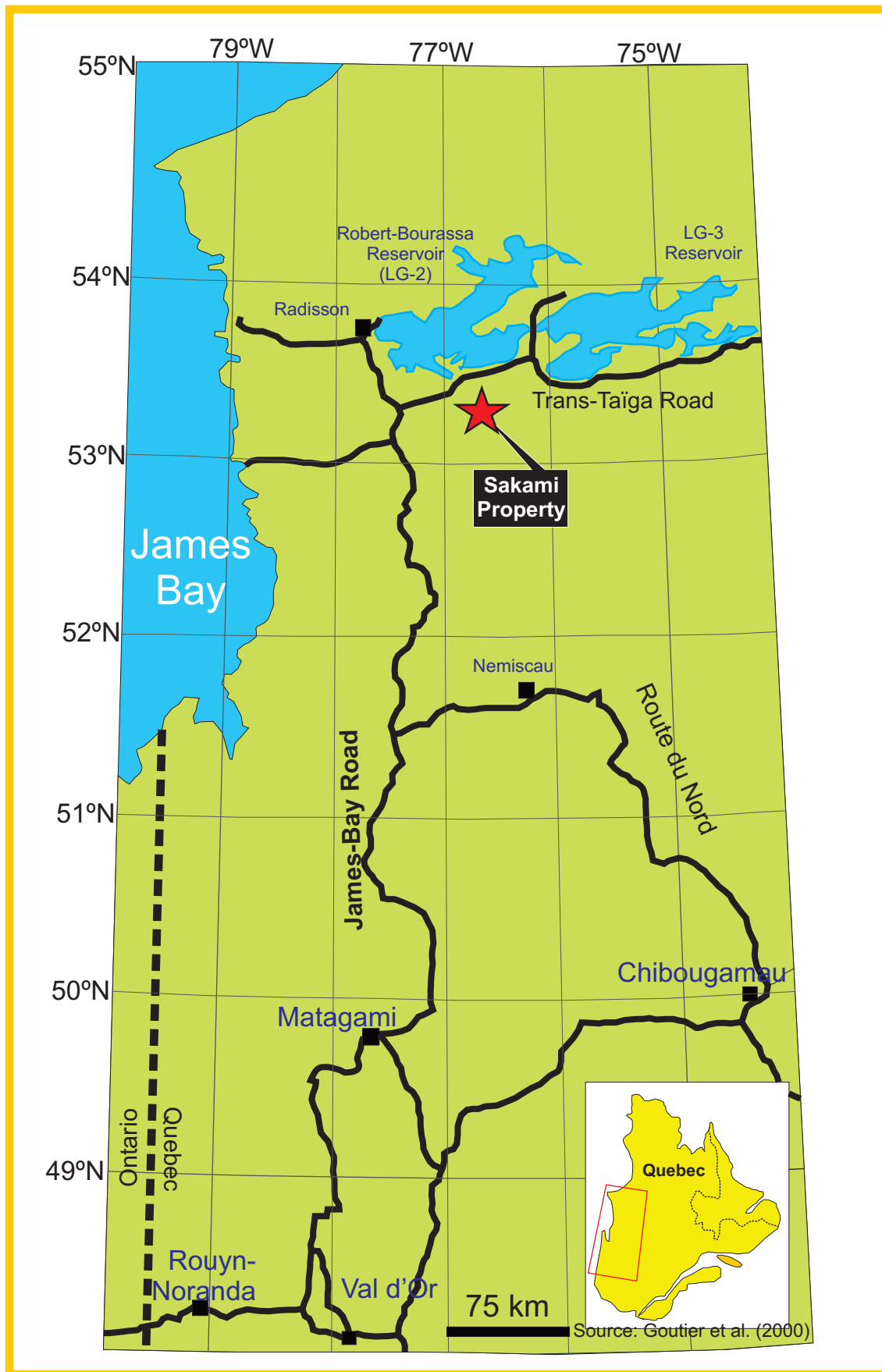


Figure 3. Schematic map of the road system of the James Bay Territory.

However, exploration on all claims falls under restriction no. 36880 which stipulates that a claim titleholder is invited to communicate with the Regional Government and the Cree Nation Government under the EGEI BJ law (Entente sur la gouvernance dans le territoire d'Eeyou Istchee Baie James). Other claims fall under restriction no. 11642 which specifies that some track of land may be reserved for the development of hydroelectric resource by the Quebec government (see Appendix 1). There are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the property. The author is unaware of any environmental liabilities, public hazards or any other liabilities associated with the property.

The new mining act of Québec requires a claim holder to notify the local municipality, the landowner, the State lessee and the holder of an exclusive lease to mine surface mineral substances of the claim obtained, within 60 days after registering the claim in the register of real and immovable mining rights, and in the manner determined by regulation. A claim holder also needs to notify the local municipality and the owner of the land on which the claim is situated of the work that will be carried out, at least 30 days before the work begins.

The new mining act of Quebec allows a company or an individual to hold a claim up to a period of two years before renewal. The claim renewal fee is \$148.48 per claim having an area larger than 50 ha. The owner or optionor also must spend a minimum of \$87.75 to \$1,625 depending on the number of validity periods (1 to 7 years) of each claim having an area > 45 ha. The amount needs to be spent on exploration work (i.e. geological mapping, geophysical survey, drilling...) for the claim to remain in good standing. The renewal must be forwarded to the Quebec government, at a cost, 60 days before the claim expiration date. The renewal is obtained only if the exploration expenses satisfy all the requirements demanded by the Ministère de L'Énergie et des Ressources du Québec.

Since the Issuer property is located on Crown Land, the CDC claims owned by the Issuer allow legal access to all parts of the land staked and provide surface rights to conduct exploration work year round. The claims owned by the Issuer are currently valid and in good standing. The claim expiring dates range from October 2017 to January 2019. Permitting from the Quebec Government to conduct overburden stripping and drilling is in the process of being obtained.

There are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the Sakami property.

Pursuant to an Agreement dated April 5, 2017 between **ABALOR MINERALS INC.** (hereinafter “**Abalor**” ) having its head office at 1132 De Chambord, St-Jérôme, Qc, J5L 2S7, Canada and **GENIUS PROPERTIES LTD.** (hereinafter “**Genius**” ), having its head office PO Box 130, Chester Basin, Nova Scotia, B0J 1K0, Canada (and collectively the “**Parties**” ); **Abalor** owning a 100% interest in 128 mining claims, which are located in the Province of Québec within the NTS sheets 33 F/06, 07 and 10; the **Parties** have agreed to complete the following transaction relating to the Sakami Property on the terms and subject to the conditions set forth in this Agreement:

**Abalor** (the “**Vendor**”) will receive from **Genius** (the “**Issuer**”) 6,000,000 shares of **Genius** at \$0.15 per share, in accordance with the following schedule: 1- (a) Completion of the Due Diligence Period, (b) Approval from Genius’ Board of Directors; 2- **Genius** will grant to **Abalor** a 2% Net Smelter Returns Royalty (NSR) on the Property. 1.0% of the Net Smelter Returns Royalty may be purchased for \$1,000,000 by **Genius**.

**Genius** is required to complete a financing of a minimum of \$800,000 on or before April 30, 2017.

## **ITEM 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

Abalor Mineral Inc. had to build two summer fly camps (North and South) on the banks of the Sakami Lake (see Figure 4). Access to both camps is via the Trans-Taiga road which intersects the NS- oriented main James-Bay Road at km 544. Driving east for 56 km on the Trans-Taiga road we turn south on a dirt road for 1.5 km to the Sakami Lake pier. A 6 km boat ride to the south brings us to the northern camp, whereas a 25 km SW nautical trip is needed to reach the southern camp. The property is also accessible via helicopter or float plane from the Radisson airport or from the small LG2 airport located near the Trans-Taiga Road.

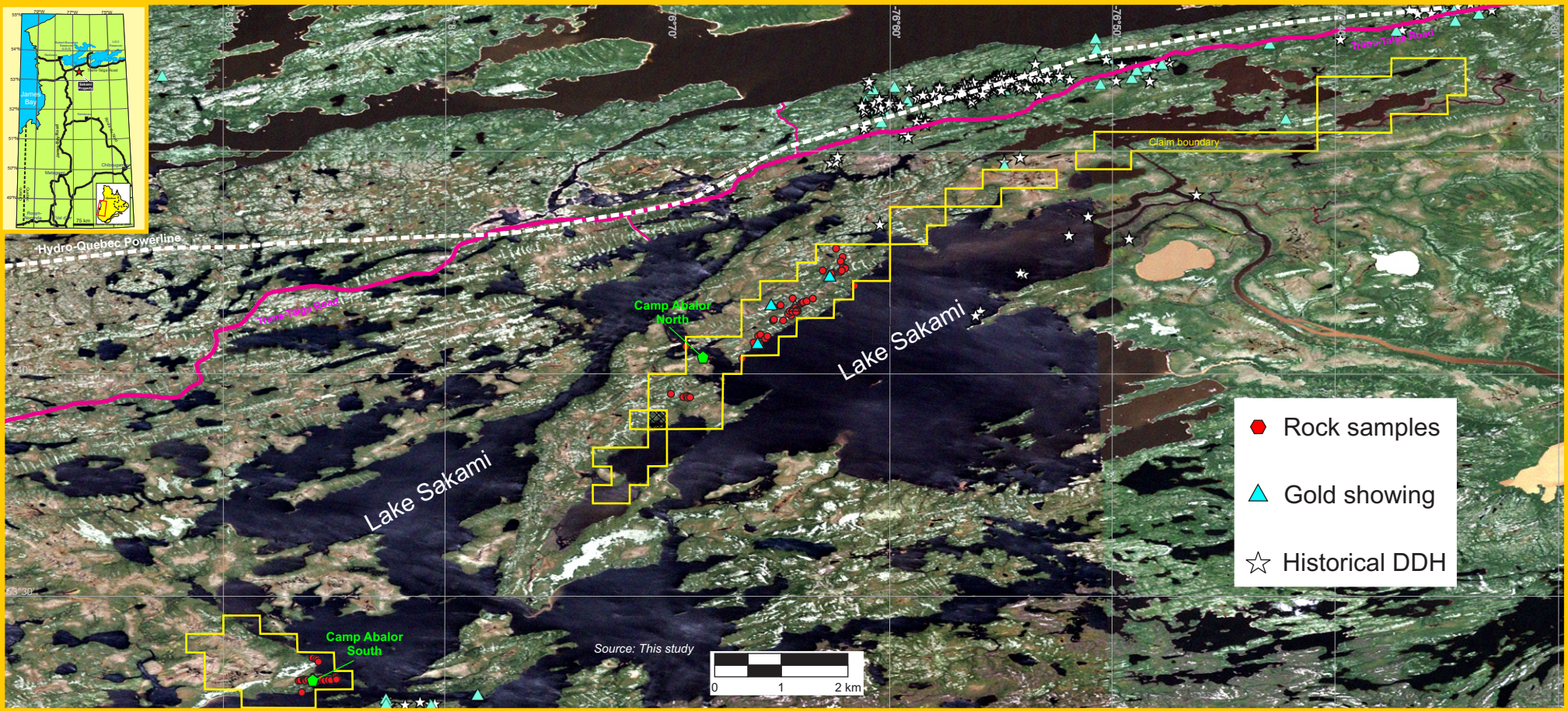


Figure 4. Designated claim boundaries, Sakami property, James Bay area.

The geomorphology of the region is dominated by glacial features and by a multitude of lakes and swamps. The direction of the ice movements determined by glacial striae, glacial grooves and eskers, was mainly SW to WSW. Moraines trending N to NNW are conspicuous and form ridges spaced at 100 to 300 m intervals. Eskers are common in low-lying areas occupied by volcanosedimentary rocks and areas with extensive glacial deposits. The topography is not accentuated but can be mountainous in regions occupied by the Proterozoic Sakami Formation. The terrane rises gradually to the east to reach 245 m ASL. In the areas occupied by granitic and volcanic rocks the glacial cover is very thin, whereas in the areas occupied by volcanosedimentary rocks and migmatites, the glacial cover is more extensive and thicker. Sand and clay deposits are common along rivers and lakes. There are numerous clay deposits along La Grande River and glacial, fluvio-glacial, lacustrine and fluvial deposits, swamps and string-bogs cover extensive areas (Sharma, 1977). The area belongs to the La Grande River hydrographic basin. The Sakami Lake waters empty to the north into the La Grande Reservoir (Robert-Bourassa reservoir) which drains westward into the La Grande River which in turn flows into James Bay.

The James Bay area is characterized by a continental climate. Summers (Early June to late August) are very short but temperate with average maxima and minima of 20.0°C and 7.4°C (July). Winter is harsh and starts in September and last until May, with extensive snow precipitations (267 cm) from October to May. Average temperatures reach -28.5°C (min) and -18.3°C (max) in January.

The vegetation, adapted to the harsh climate, typifies the Taiga forest where the trees are sparse and small. The cover is quite irregular and may vary from heavily to low-forested. The dominant species are black spruce and jack pine, but larch, birch, aspen and tamarack are also present. Alders grow abundantly near lake shores. The ground is covered by pale green lichen commonly called reindeer moss that is highly inflammable during the dry season. Mammals occupying this harsh ecosystem include the lynx, beaver, otter, muskrat, marten, black bear, caribou, moose and wolf. There is a sizable population of seagulls, partridges, geese, black ducks, blue jays, loons and sparrows. Pike and walleye abound in the lakes and streams, whereas speckled trout is found only in small lakes where there are no pike and walleye.

The major infrastructures of the James Bay area consist of a string of dams, water reservoirs, dykes and hydroelectric power plants (LG1 to LG4) distributed in an EW-direction from the main LG2 site near Radisson to the eastern Caniapiscau Reservoir. The Trans-Taiga road is the lifeline to the sparsely populated area and is a vital link to the hydropower centrals. Radisson is a small village with a regional airport nearby with daily access to the major cities of Montreal and Quebec, 1600 km to the south. There are very little resources in the area. However, Radisson offers several services, including lodging, food, gas, hospital, car and truck rental. Manpower and expertise to conduct any exploration campaign have to be brought from Val d'Or, Rouyn-Noranda or Mattagami. Water for drilling can be obtained from the numerous streams and lake throughout the property including from the Sakami Lake. A Hydro-Quebec 720 kV power line run EW just north of the Trans-Taiga Road from the LG-3 generating station to the distribution center along the James-Bay road. The line is roughly 20 km as crow fly from the core of the Sakami property.

There are no mineral resources or mineral reserves on the Sakami property according to the 2005 CIM Definition Standards. There are no existing mine workings, tailing ponds, waste deposits and important natural features and improvements relative to the outside property boundaries. However, the property contains mineralized zones manifested by stripped outcrops, small pits and/or trenches and blasted zones. There is sufficient unused land within both Sakami claim blocks for waste and tailing disposal and the construction of a mine and milling installations.

The optimum length of the operating season in the James Bay area ranges from Late June to Mid-October, when mining companies usually conduct their field work such as geological mapping, drilling, overburden stripping, trenching, soil survey and sampling. However, airborne and ground-based geophysical surveys and drilling can be carried out yearlong, except for radiometric surveys.

## **ITEM 6 HISTORY**

**1940-1979:** The first systematic geological work in the Lake Sakami area was led by the

Geological Survey of Canada in the 1950's and 1960's and generated a 1:506,880 scale geological map (Eade et al., 1957; Eade, 1966). Eade (1966) described several types of orthogneiss in the Bienville subprovince adjacent to a band of metavolcanic and metasediments exposed along the La Grande River. The southern Lake Sakami sector was subjected to magnetic and electromagnetic surveys conducted for Zulapa Mining Corporation and Godfrey, Clarke and St-Mary's Exploration (Boniwell, 1965a, 1965b, 1965c). In the 1960's and 1970's, the MRNQ completed a systematic mapping campaign covering the regions of the La Grande River hydrographic system before the LG-2 and LG-3 reservoirs were progressively filled in the late 1970's. This resulted in several reports and maps (1:63,350 scale) (Mills, 1965, 1967, 1973, 1974; Sharma, 1977). Mining companies, notably le Groupe Minier SES (with the SDBJ) carried out several exploration campaigns in the La Grande River basin including geophysical surveys, geochemical sampling, prospection, mapping and drilling, looking at discovering uranium prospects (Dupuis et al., 1976; Caron and Fouques, 1979; Schumacher and Fouques, 1979).

**1980-1985:** St-Seymour (1982) highlighted the stratigraphy of komatiitic flows in the Lac Guyer sector (near the LG-3 Reservoir) and completed geochemical and petrogenetic studies of the volcanic rocks (St-Seymour et al., 1983; St-Seymour and Francis, 1988). Skulski et al. (1984) and Skulski (1985) studied a sector of the La Grande Greenstone Belt in the vicinity of the LG-3 Reservoir and incorporated a mapping survey followed by petrography and geochemical work.

**1986-1998:** Resurgence in exploration by Phelps Dodge, Virginia Gold Mines, Barrick Corporation and Exploration Boréale lead to the discovery of Au, Cu and Zn showings in Archean metavolcanic rocks (Osborne, 1995; Desbiens, 1996; Masson, 1996; Girard, 1996; De Chavigny, 1998; Simard, 1999).

**1998-1999:** Luc Lamarche and Jean-Raymond Lavallée collected four rock samples located on the southwest shore of Sakami Lake. The samples represented Archean highly folded and sheared magnetite iron formations, mafic metavolcanic rocks and paragneiss rocks (NTS sheet 32F02-08). Chemical analyses yielded gold values of 1.92 g/t, 2.41 g/t, 6.06 g/t and 8.94 g/t respectively (Lamarche and Lavallée, 1998). The outcrops were stripped of the overburden in 1999 and a series of channel rock samples confirmed the high background gold values of the

volcanosedimentary rocks (300 to 2000 ppb Au). Best values obtained were: Zone 23: 1.87g/t Au over 9.7m; Zone 26: 1.72g/t Au over 20.8m and 2.01g/t over 3.0 m.

The GSC completed a geological compilation of a large sector of the James Bay region accompanied by a lithogeochemical study of the Bienville Subprovince lithologies (Ciesielski, 1998, 1999). A metallogenic study of the 33F NTS sheet was carried out under the Moyen-Nord program put forward by the Ministère des Ressources Naturelles du Québec (Gauthier, 1996; Gauthier et al., 1997). Following these studies, the Quebec survey initiated a detailed geological mapping program of the La Grande sub-province at a 1:50,000 scale that included NTS sheets 33F/03 to 06, 33F11 and 33F12. NTS sheet 33F07 was also mapped in detail (Goutier et al., 2000).

The bulk of past exploration work was performed by several consulting companies on behalf of Matamec Explorations Inc. The limits of the former Sakami property straddle in large part the boundaries of the Genius Properties claims. However many claims located in the NTS sheet 33F02, south of the Genius Properties property, still belong to Matamec and include the JR showing.

**2001:** Gestion Minière Explorer completed a magnetic survey on Matamec Explorations Inc.'s Sakami property within a 75 km grid (Couture, 2001; GM58648). The ground-based survey revealed large variations of the TMI (Total Magnetic Intensity). In the NW sector of the grid, high magnetic values are associated with ultramafic rock units or iron formations. The magnetic grain is oriented ENE parallel to the strike of the principal lithological assemblages of the region. The deformation zone delimiting the contact of the Opinaca and La Grande subprovinces is characterized by a NE-oriented corridor with moderate magnetic variations. A 2 km-long, NE-oriented highly magnetic feature is observed within the Laguiche Group.

Reconnaissance geological mapping accompanied by prospecting was done by geologists from the Gestion Minière Explorer Company. This led to the discovery of several pyrite and arsenopyrite-rich zones (Digonnet, 2001; GM59019). The Matamec JR showing was stripped of

the overburden over 19 m and channel samples taken. Mapping of the showing revealed a sequence of folded massive basaltic flows affected by a  $S_2$  schistosity and containing several pyrite-rich, rusty layers and pods. Best gold values obtained for the channel samples are: 5.47 g/t, 1.83 g/t and 1.53 g/t (Channel #1) and 2.13 g/t (Channel # 2).

During the 2001 winter, a 32.6 km NW/SE-oriented grid line was established on the Matamec Sakami property. IP/Resistivity and magnetic surveys were carried out by Géophysique TMC Inc. (Boileau, 2001; GM59601). In total, 71.1 km of lines were used for the ground-based magnetic survey, whereas the IP/resistivity survey was completed on 9.5 km of line. The IP/Resistivity survey emphasized three main NE-SW-oriented anomalous zones, the first two characterized by high magnetic values, high chargeability, low resistivity and pointing toward the presence of massive to semi-massive sulphide mineralization. Two high magnetic zones were detected at the NW and SW portions of the grid.

**2002:** The 2002 winter exploration campaign consisted of line cutting, ground-based geophysical surveys and a drilling program (N'Dah, 2004; GM60822). The exploration covered the Peninsula and JR sectors. N'Dah (2004; GM60822) reports a series of 9 drillholes totalling 1239 m in the Peninsula and JR sectors. Three areas of the Sakami property were investigated: JR, Île and Sipanikaw. Work consisted of systematic traverses each 100 m apart, geological mapping at 1:5,000 scale, collection of rock samples from mineralized or altered outcrops. Several iron formations were discovered (Lavallée, 2003; GM60046). Rock sampling of the JR sector provided 25 Au assay values > 100 ppb, with one concentration reaching 9.6 g/t. This sample was collected from a NS-oriented, 250 m long, rusty basaltic layer containing 1-2 % pyrite. Three other samples from this layer yielded: 4.53 g/t Au, 8.60 g/t Au and 6.83 g/t Au. In the Île sector, 18 rocks samples produced gold concentrations > 100 ppb, with one sample having 5.17 g/t. The later was sampled from an EW-oriented, 1 m-wide shear zone containing 5-6% pyrite-pyrrhotite within a paragneiss. One DDH sunk on a IP-mag anomaly present over the JR showing yielded an intersection of 1.43 g/t over 13.05 m.

In the Sipanikaw-North sector, which is included in the perimeter of the Genius Properties property, two interesting zones were recognized by Lavallée (2003; GM60046). The first one is a

mylonitized and sheared zone containing 6-7% pyrite-pyrrhotite with traces of chalcopyrite. Best gold values obtained were: 639, 115 and 857 ppb respectively. The second zone located 4.5 km north is a quartz vein containing pyrite and chalcopyrite and yielding 757 ppb Au. Other samples collected from the same zone and associated with a mylonitized corridor showed a maximum gold content of 723 ppb. In the Sipanikaw South sector only five samples gave Au concentrations > 100 ppb.

**2003:** In the La Pointe sector, a gold-rich anticlinal body plunging 50° to the SW forms the Zone 25 showing (Lavallée and Lavallée, 2004; GM61190). Seven km north of this zone, in the JR sector, showing 43 is related to a drilling intersection of 2.03 g/t Au over 6.0 m. The 9.6 showing is located 1.6 km west of the preceding zone and consists of a rusty layer containing quartz veinlets yielding a high gold value of 28.73 g/t. Prospecting, overburden stripping and geological mapping of the JR., 9.6 and 43 showings were also carried out. Six DDH, totaling 1902 m, were bored in the La Pointe sector. DDH EX-51 yielded an intersection 2.47 g/t Au over 3.0 m and hole EX-52 produced a value of 1.77 g/t Au over 3.0 m in a silicified and mineralized band.

**2004:** Humus sampling was carried out around the JR showing (Leclerc, 2005, 2006: GM61634 and 62497). At least twenty-seven (27) DDH delimited this structure which defines a 10-55 m antiform oriented 154°-334° with undulations plunging 50° to the SW. Average intersections varied from 2 to 3 Au g/t. The 26 showing relates to gold mineralization associated with magnetite iron formations interlayered with metasediments in mafic volcanics of the Yasinski Group. The structure forms a reverse syncline. Seven DDH investigated the showing. Hole EX-19 DDH provided an intersection of 13.67 g/t Au over 7.35 m.

Showing 43 was detected by a IP-Mag anomaly. An intersection of 2.03 g/t Au over 6 m was found in a silicate iron formation, chert and metabasalt. Grab and channel samples produced values ranging from 1 to 36 g/t Au. The mineralization was associated with several parallel, narrow zones oriented 100°-280°. This orientation is similar to that observed in the deformation corridor marking the contact of the Opinaca and La Grande sub-provinces 100 m to the north.

The 9.6 showing is located 1.3 km from showing 43. Prospection and overburden stripping provided rock samples with a 9.6 g/t Au value within a silicified and rusty metabasalt. Subsequent overburden stripping allowed the collection of several samples yielding > 6 g/t Au. These high gold concentrations are found in a 3-4 m-wide corridor extending northward for 250 m. Showing 9.6 was further sampled and produced a total 78 channel and 19 grab samples (Leclerc, 2006;GM62497). Eleven grab samples showed gold content > 1 g/t averaging 8.42 g/t. Most of the high values come from a rusty pyritized basalt. Fifteen channel samples generated a weighted mean value of 6.22 g/t Au over 14.34 m. Finally, 7 DDH were sunk on the JR showing resulting in 733.20 m of core.

**2011-2012-** Abalor Minerals Inc. installed two bush camps on the banks of Sakami Lake from which prospectors, line cutters and geologists could reach the area of exploration (Figure 4) within the property.

Survey lines were cut out in the Northern Section (Sipanikaw) prior to the rock sampling survey along NE-SW direction at 200 m intervals with the starting point on an 8 km NW-oriented baseline. Two tie-lines of 2.2 and 8 km in length, with the same orientation, were also established (Figure 5). In total, 74 km of gridlines were cut, chained and picketed. In the southwestern section, survey lines were cut out prior to the humus survey along NE-SW direction at 100 m intervals with the starting point on a 1.4 km NW-oriented baseline (Figure 5). The largest gridline was cut on the western shore of Lake Sakami with 14 NE-SW-oriented lines of various length (125 to 1,550 m) due to swampy terrane or the presence of water (Figure 5). In total, 17 km of gridlines were cut, chained and picketed.

Grab rock samples were collected from the northern grid (Sipanikaw). The localization of samples enclosed within the claim boundaries are reported in Figure 5. Lithologies of the southwestern claim block were also sampled. Diverse lithologies, mostly showing signs of alteration and/or mineralization were gathered. The most common types are mylonitic or sheared schists and volcanic rocks showing sericitization, tourmalinitization, oxidation, silicification or brecciation (Boily, 2013a,c). Quartz veins in shear or mylonitic zones were also collected. Commonly, the mineralized zones contain by decreasing abundance: pyrite (1-15 %),

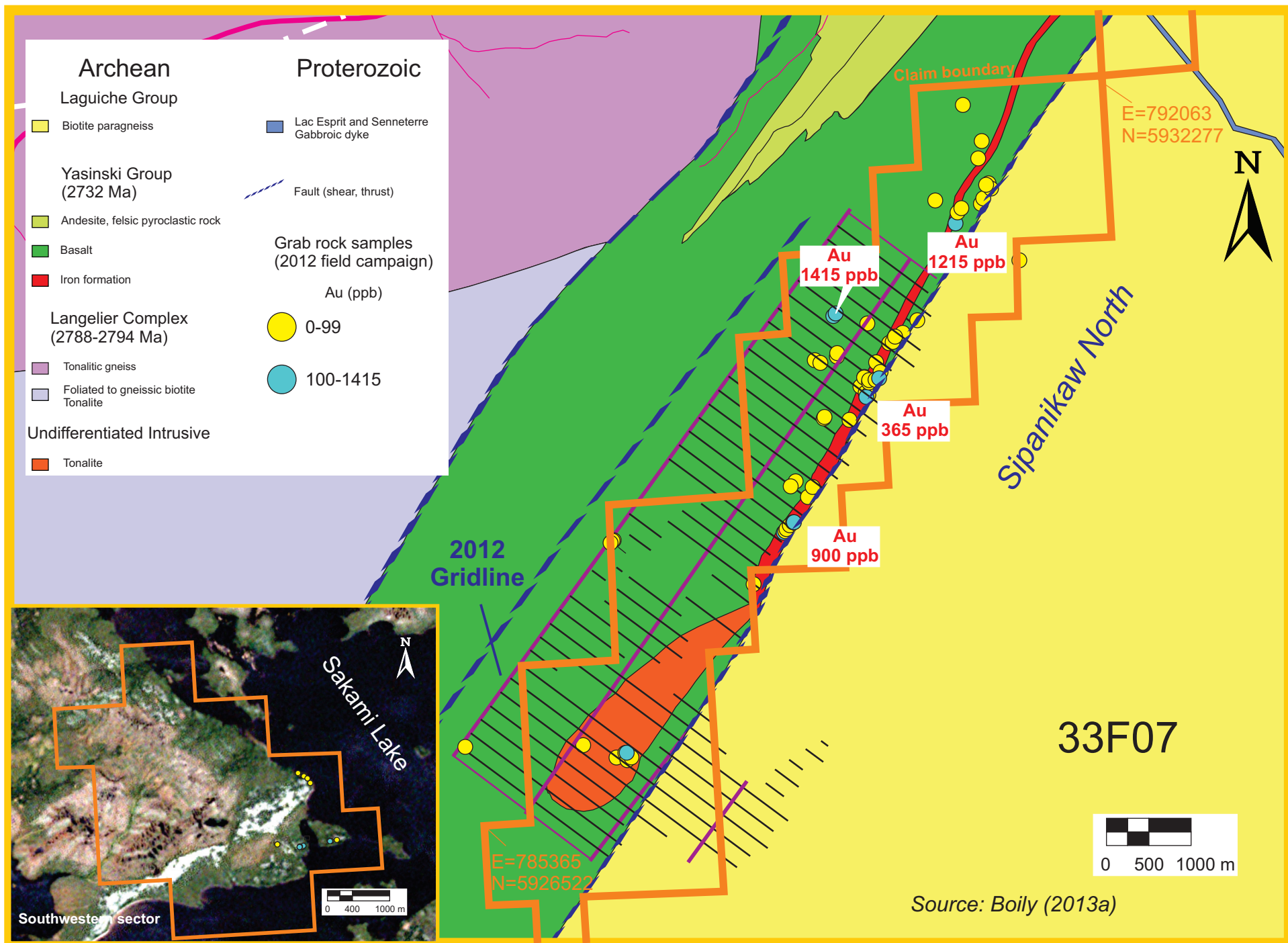


Figure 5. Geology of the Northern segment of the Sakami property (Sipanikaw North). The outline of the gridline and localization of the grab rock samples collected during the 2012 summer campaign are reported on the map. Included is the localization of the 2012 samples grabbed in the southwestern sector of the property. Samples with gold assay values greater than 100 ppb are highlighted in blue. UTM Coord.: E=Easting, N=Northing; NAD83; Zone 17N.

chalcopyrite, arsenopyrite and bornite. The volcanic rocks encountered are basaltic to rhyolitic in composition.

Figure 5 shows the localization of each sample and highlights those presenting Au assay values > 100 ppb. Past results from Abalor indicate more than 35% of all samples (67) are at or below the detection limit for gold assays (< 5 ppb), with 39% (72 samples) ranging between 5 to 20 ppb Au and 17% (33) presenting concentrations between 20 and 90 ppb Au. Eighteen samples (9%) display gold values > 100 ppb, with three rock specimens with significant concentrations: 214038=1.42 g/t Au; 268312=1.22 g/t Au, 214021=0.90 g/t Au ppb Au. Table 1 presents the most significant gold values obtained from the analyses of the grab samples (Boily, 2013a).

Sample	Easting*	Northing	Description	Au (ppb)	Year
214038	390443	5921938	Mylonitized basalt with 5% pyrite+chalcopyrite	1415	2012
268312	391945	5922886	As 268305	1215	2012
214021	389750	5919526	On strike with 11 to 18 but at eastern extremity, with garnet and 10% pyrite	900	2012
696246	390732	5920940	Altered, amphibolite, mylonite, rusty	542	2011
100842	390727	5920927	Altered mylonite	365	2012
100843	390729	5920927	Altered zone in mylonite	323	2012
100806	376529	5903071	Mineralized veinlets, near granite contact	239	2011
100832	376418	5903068	Fine grained amphibolite (100803)	183	2012
214044	387535	5916973	Garnet metabasalt with 3% pyrite, arsenopyrite, chalcopyrite	180	2012
214039	390413	5921915	Mylonite	167	2012
100837	375935	5903014	Fault zone between tonalite and brecciated andesite	158	2012
100841	390728	5920929	Sericitized mylonite	147	2012
696228	376093	5904144	Silicified basalt with 1% fine grained pyrite	141	2011
100838	375968	5903003	As #100836 with 10 cm qtz vein	136	2012
100833	376416	5903067	Siliceous zones (100803)	123	2012
214030	390892	5921145	Andesite near sericitized & silicified zone	118	2012
214046	387550	5916973	7 cm vein in metabasalt with >20% pyrite+arsenopyrite	111	2012
214014	389621	5919416	Altered zone near shore lake	106	2012

\*NAD83; Zone 18N

**Table 1.** Significant gold assay values for grab rock samples collected from the northern Sakami property during the 2012 summer campaign of Abalor Minerals Inc.

Figure 5 clearly illustrates the localization of mineralized samples concentrated along a NE-SW oriented corridor corresponding to the trace of a regional thrust/shear zone defining the contact between the dominantly mafic metavolcanic rocks of the La Grande Subprovince (Yasinski Group) and the metasediments of the Opinica subprovince (Laguiche Group) (Goutier et al., 2000). Significant gold mineralized samples with values greater than 100 ppb occurred principally in sheared or mylonitized hydrothermally altered (pyritized, sericitized) metavolcanic rocks. The MRNQ geological compilation map indicates the presence of a stratigraphically bounded, > 8 km long band of iron formation within the Yasinski Group near the contact with the main shear/mylonite corridor. The iron formation are commonly gold-bearing in certain stratigraphic layers of the Yasinski Group (ex: Lavallée, 2003; GM60046 and Leclerc, 2005, 2006: GM61634 and 62497). However, only one sample of iron formation, devoid of gold, was collected during the 2012 summer campaign.

All humus samples were collected on gridlines (Figure 6) established on an eastern peninsula jutting in the Lake Sakami within the southwestern block of claims. Figure 6 shows the location and name of each sample tied to a grid station located within the perimeter of the Sakami property claims. Figures 7 and 8 illustrate 2D contour maps highlighting the few samples with significant gold concentrations (Boily, 2013b). The humus data indicate more than 76% of all samples (395) are at or below the detection limit for gold assays (< 0.005 g/t), with 19% (98 samples) ranging between 0.006 to 0.020 g/t Au. Only 11 samples (2 %) display concentrations greater than 0.020 g/t (0.020 to 0.552 g/t), with three humus specimen with significant concentrations: M100055=0.102 g/t Au, M100233=0.288 g/t Au and M100347=0.552 g/t Au (Figure 8). Figure 7 is a contour plot of the Au assay values that emphasizes concentrations higher than 0.020 g/t (20 ppb) Au. Most of these humus samples are situated on the southwestern branches of L5W, L7W, L9W and L10W respectively. Another interesting area is found on the northeastern branch of L14W. Figure 8 is another contour maps singling out the two highest gold values which are found on the southwestern branches of L7W and L9W respectively. Overall, the geochemical contour maps, define two “anomalous zones” (A and B) which are characterized by clusters of gold values > 0.020 g/t Au. Two anomalous rock samples collected from outcrops exposed within the grid area are reported on the map (Figure 7). Only one grab rock samples with a gold content of 0.141 g/t occurs in the general are of anomalous zone B. No anomalous

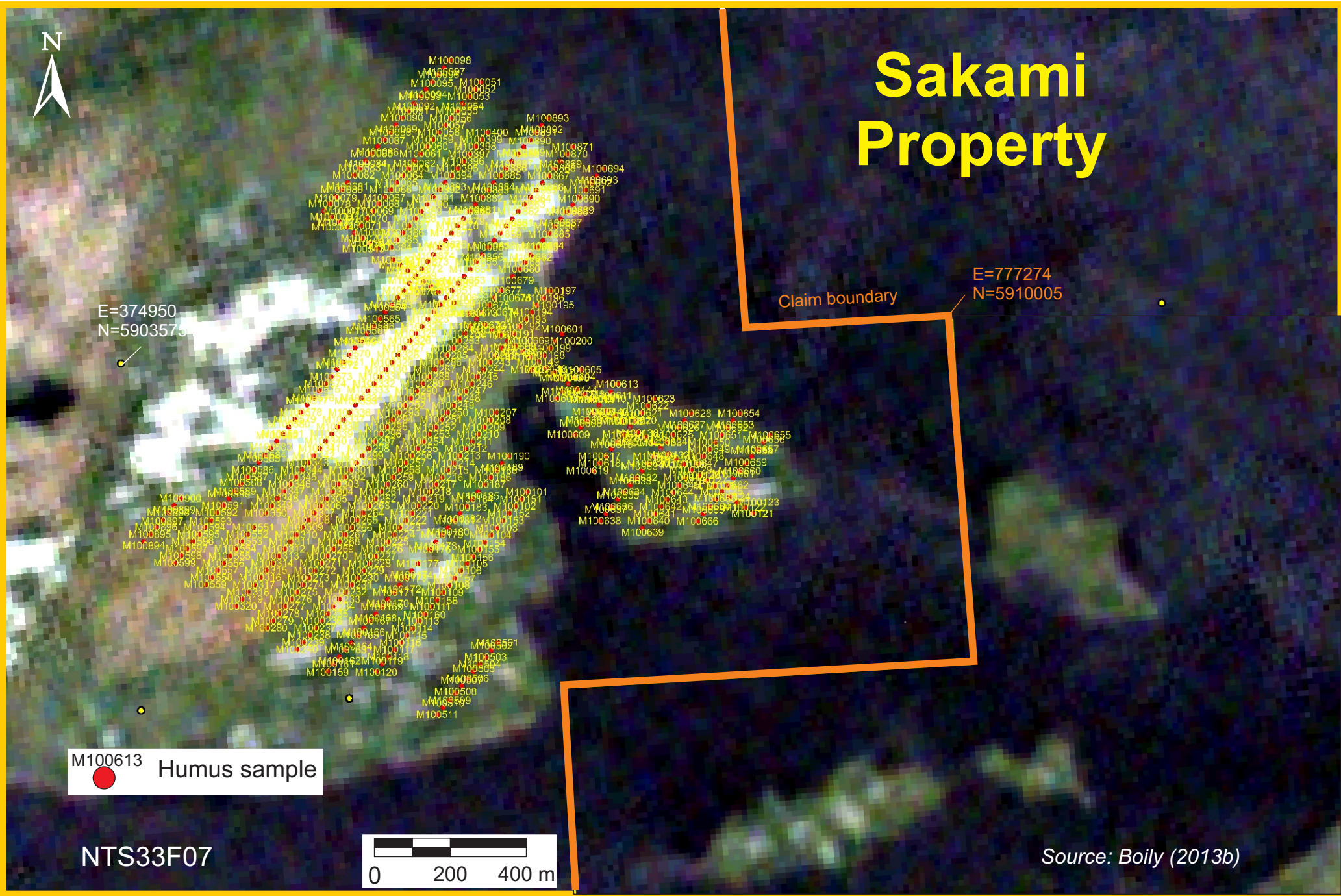


Figure 6. Localization and identification of humus samples collected along the gridlines during the 2011 sampling campaign, southwestern Sakami property. UTM Coord.; E=Easting; N=Northing; NAD83; Zone 17N.

gold values are correlated with the trace of shear zones/deformations zones delimiting the contact between hornblende-biotite tonalitic intrusive rocks and mafic volcanic rocks (Figure 8). Unfortunately, Anomalous zone A is underlain by bogs and swampland with virtually no outcrop zone.

Anomalous zone A overlies a biotite-hornblende tonalitic pluton in contact with the mafic volcanic rocks of the Yasinski Group defined by shear/deformation zones (See Goutier et al., 2000). Gold mineralization found in volcanosedimentary and plutonic rocks of the La Grande Subprovince is commonly genetically or spatially associated with major crustal breaks (ex: the La Grande Sud Au-Cu deposit; Mercier-Langevin et al., 2012). Furthermore, there are several significant gold showings and prospects adjacent to the southeastern boundaries of the Sakami property and occurring in mafic volcanic assemblages of the Yasinski Group, some of which are associated with mylonitic or shear zones (ex: JR, De l'Île and EX43; Lavallée, 2003: GM60046; Lavallée and Lavallée, 2004: GM61190; Leclerc, 2005, 2006: GM61634 and 62497).

## **ITEM 7 GEOLOGICAL SETTING AND MINERALIZATION**

### *7.1- The La Grande Subprovince*

The La Grande Subprovince is an Archean volcanoplutonic assemblage composed of an ancient tonalitic basement (2.79-3.36 Ga), several westward-younging volcanosedimentary assemblages and of multiple ultramafic to felsic intrusions (Card and Ciesielski, 1986; Goutier et al., 2002). It is limited to the south by the Opinaca Subprovince, formed by metasedimentary and plutonic rocks comparable to that exposed in the English River and Quetico subprovinces of Ontario (Card and Ciesielski, 1986). The northern boundary of the La Grande subprovince is defined by the Bienville Subprovince which is composed of voluminous hornblende-biotite TTG (Tonalite-Trondhjemite-Granodiorite), granite-granodiorite plutonic suites and their pyroxene-bearing equivalents (ca. 2.74-2.69 Ga) (Ciesielski, 2000; Simard et al., 2004; Roy et al., 2004). In the La Grande hydrographic basin, the La Grande Subprovince is divided in two large structural, metamorphic and lithological domains. The Northern Domain is dominated by plutonic and

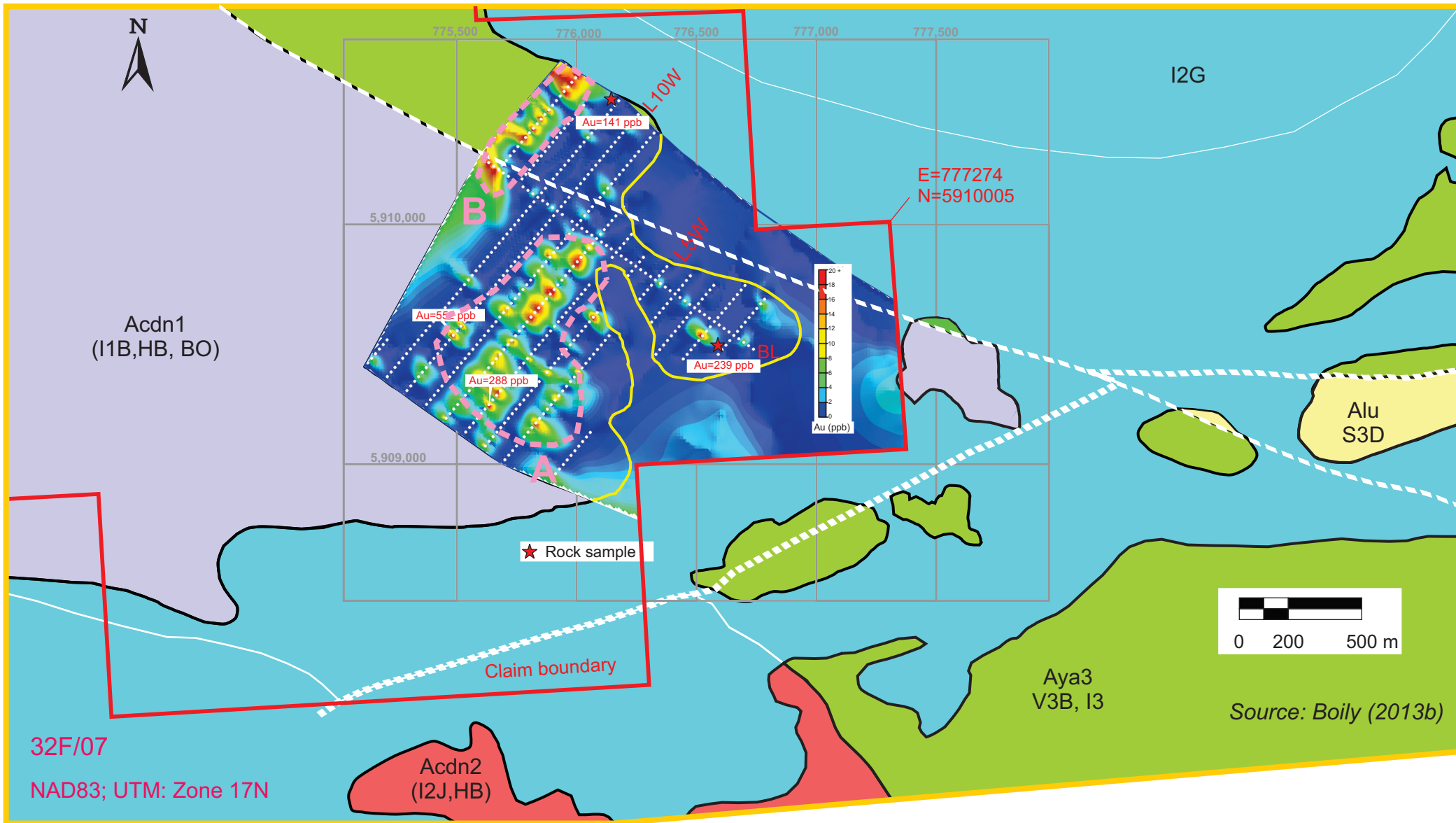


Figure 7. Geochemical contour map presenting the gold assay values of the humus samples collected during the 2011 exploration campaign on the southwestern part of the Sakami property. The assay values are capped at 0.020 g/t Au to highlight the anomalous concentrations. Two significant gold assay values of rock samples collected during the campaign are reported. UTM Coord.: E=Easting; N=Northing; NAD83; Zone 17N.

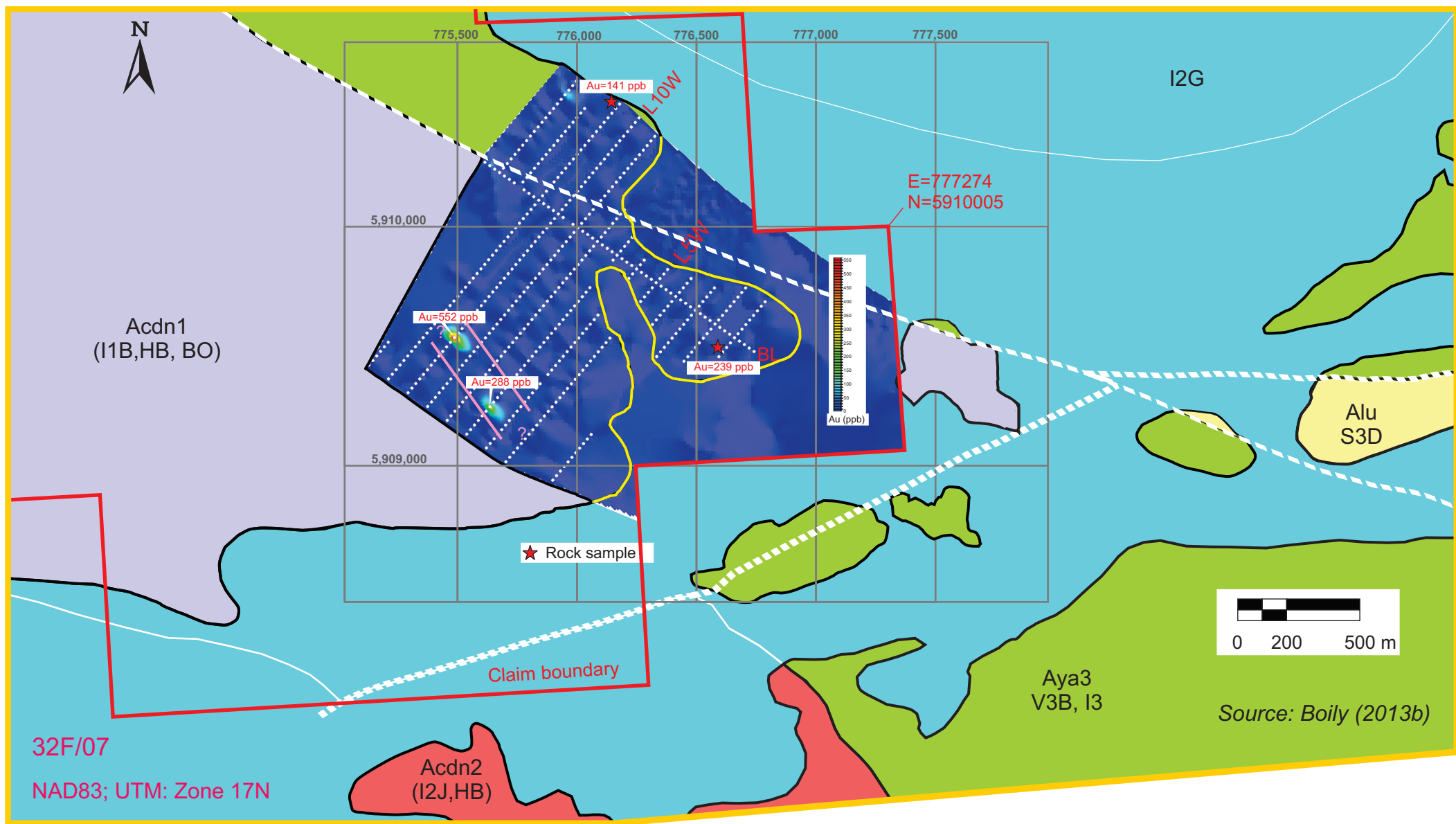


Figure 8. Geochemical contour map presenting the gold assay values of the humus samples collected during the 2011 exploration campaign on the southwestern part of the Sakami property. High concentrations of two samples: 0.552 and 0.288 g/t Au are highlighted in the southwestern branch of the L7W and L10N grid. Two significant gold assay values of rock samples collected during the campaign are reported. UTM Coord.: E=Easting; N=Northing; NAD83; Zone 17N.

gneissic rocks whilst the Southern Domain encloses the volcano-sedimentary sequences (Goutier et al., 2002).

The basement rocks of the La Grande Greenstone Belt (LGB) are formed by gneissic and foliated tonalites of the Langelier Complex (2788-3360 Ma). The complex is in structural contact with younger supracrustal sequences composing the Yasinski (2733 Ma) and the Lac Guyer (2820 Ma) groups. The former is constituted of tholeiitic basalt, feldspathic wacke, magnetite-bearing iron formation, andesitic and felsic pyroclastite of calco-alkaline affinity (Goutier et al., 2001a, b, 2002). The Yasinski Group (2732 Ma), which is represented upwards by the Aya 1 to Aya4 units (Goutier et al., 2001a) (Figure 9). The Aya 1 unit consists of a basal iron formation represented by an oxide facies (magnetite) often metamorphosed into a garnet amphibolite. Metric bands of wacke and polygenic conglomerate intercalated with volcanic flows form the bulk of the Aya2 unit. The wacke is metamorphosed locally into a biotite-actinolite schist and the conglomerate contains volcanic, gabbroic and iron formation fragments. The basalt and andesitic basalts (Aya3) are the dominant lithologies encountered in the Yasinski Group. These are tholeiitic in affinity and occur principally as pillowed, less frequently as massive or brecciated flows. Metamorphosed into foliated amphibolites, these volcanic rocks were erupted in a deep oceanic environment. The Aya4 unit contains andesitic flows and tuffs of intermediate composition. The clastic rocks of the Ekomiak Formation rest unconformably on the Yasinski Group and are limited by numerous faults. The principal lithology is represented by a polygenic conglomerate characterized by tonalite clasts.

The supracrustal rocks are intruded by diorites, quartz diorites and hornblende-biotite tonalites of the Duncan intrusions (2709-2716 Ma), ultramafic intrusions, the vast Radisson batholith (2712 Ma) and by late to post-tectonic intrusions, such as the Vieux-Comptoir Granite (2618 Ma) and the quartz monzodiorite and porphyritic granodiorite of the Bezier Pluton (2674 Ma). Regional metamorphism, principally affecting the supracrustal rocks, varies from lower greenschist to upper amphibolite. The Langelier Complex was first affected by a ductile deformation and the latter supracrustal sequences were complexly deformed into kilometric folds and thrust faults and transformed by a regional dome and basin tectonic phase (Goutier et al., 2002).

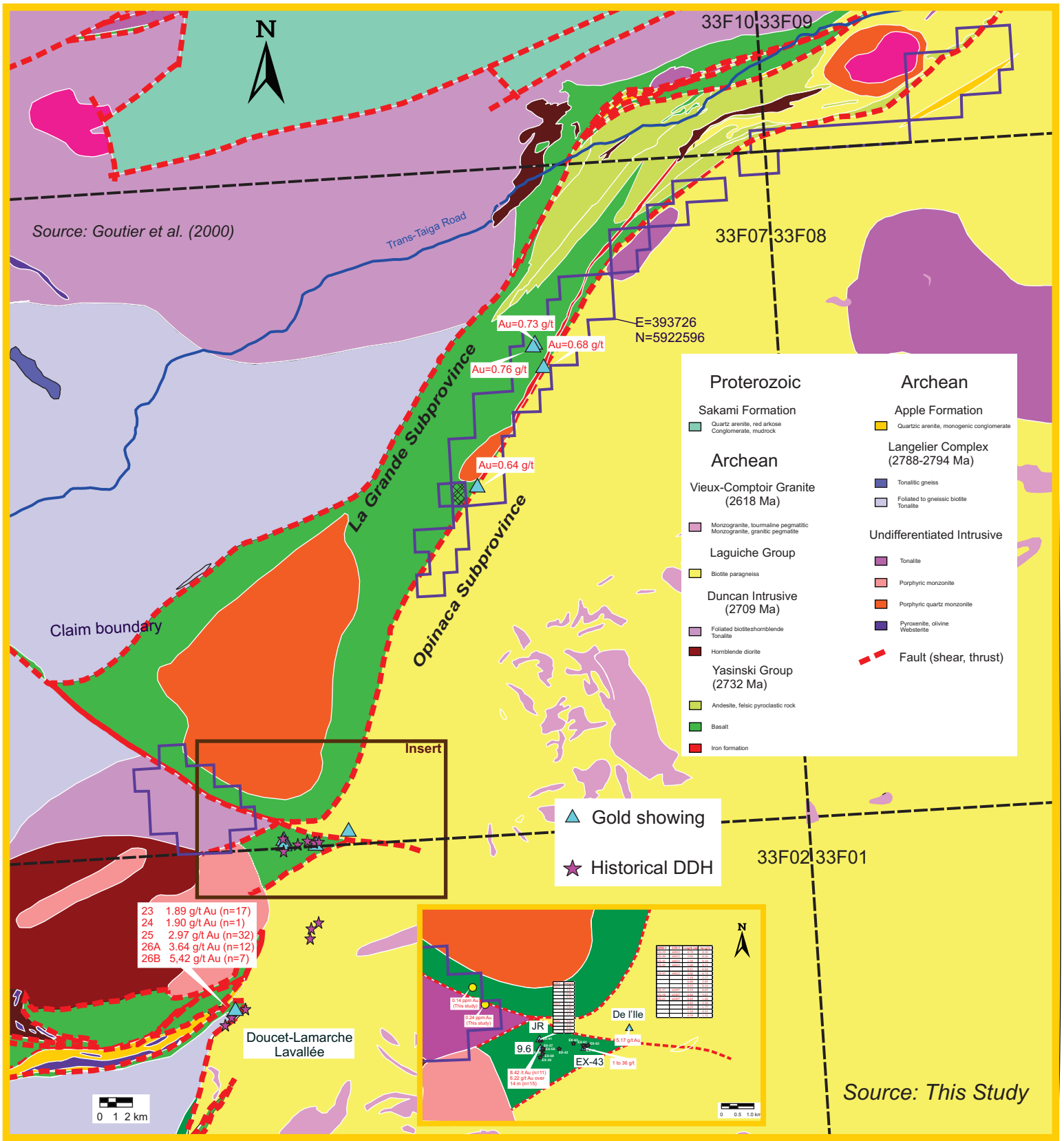


Figure 9. Geological map of the Sakami property area. The localization of the principal showings and prospects of the region are reported on the map accompanied by the best gold values/drill intersections. UTM Coord.: E=Easting; N=Northing; NAD83; Zone 17N.

## *7.2-The Opinaca Subprovince*

In the area of investigation, the Opinaca Subprovince exposes several injections of white-pink monzogranites and pegmatitic monzogranites in a vast assemblage of metamorphosed sediments assigned to the Laguiche Group (Goutier et al., 2000). The metasediments consist principally of biotite paragneiss interstratified with arkosic arenite layers. Migmatites appear further south toward the center of the Opinaca basin. In this sea of paragneiss, formerly a feldspathic wacke presenting turbidite textures (ex: sorting), some layers of polygenic conglomerates, quartz arenites, biotite schist, amphibolite and felsic volcanic rocks were recognized.

## *7.3-Proterozoic Rocks*

The Proterozoic rocks comprised three networks of gabbroic dykes dated between 2.07 and 2.5 Ga (Ernst et al., 1998). The Proterozoic deformation associated with a brittle deformation event generated dextral shears leading to tensional basins along a 330 km span of the La Grande hydrographic basin. The basins were filled by quartz arenites, red sandstones, conglomerates and sandstones of the Sakami Formation (2216-2510 Ma).

## *7.4- Geology of the Sakami Property*

The geology of the southeastern Sakami property is dominated by two rock types. Mafic volcanic rocks of the Yasinski Group are essentially basalts and amphibolites striking N270° to N300° and dipping sharply to the north (70° to 90°). The mafic rocks are folded along a N300° axis dipping 35° (P<sub>2</sub>) (Digonnet, 2001; GM59019). The basalts and amphibolites are often massive and recrystallized showing a microgabbroic texture. Some basalts contain biotite and garnet and are highly schistose. They are intercalated with iron formations. The second rock type is a hornblende-biotite tonalite intrusive rock of the Duncan Intrusive Suite (Goutier et al., 2000). The tonalite post-date the volcanic rocks and is variably deformed. The pink to grey pluton is homogeneous, affecting a white patina. It is a medium-grained plutonic rock composed of 40-50 % plagioclase, 35-45 % quartz, 5-15 % hornblende and biotite with < 5 % of K-feldspar. Accessory minerals are epidote, titanite, and apatite.

The northeastern segment of the property straddles the sheared/thrusted and deformed contact between the la Grande (Yasinski Group) and Opinaca (Laguiche Group) subprovinces. Geological mapping carried out by Lavallée (2003; GM60046) identified this contact in the Sipanikaw south, central and north sectors (Figures 10 and 11). The Yasinski Group exposes principally massive to pillowed metabasaltic rocks injected by gabbroic sills/ bodies. Layers of garnet amphibolite and ultramafic rocks are observed near the shear contact. Felsic schists and dykes are commonly associated with mylonite zones. Hydrothermally-altered exhalites, sulphide-rich cherts and sulphide/oxyde iron formations are also observed. These are most likely to contain gold mineralization. The main schistosity is oriented NE-SW and dips moderately to sharply to the NE (235°/50°-70°).

#### *7.4.1- Structure*

The structure of the Sakami area is dominated by thrust faults, dextral shearing and large folds involving all crustal rocks. The Langelier Complex tonalites form a large EW-oriented dome to the southwest in structural contact with the volcanic rocks. These are folded along a vast synform, plunging to the NE and tilted toward the SE. The metasediments of the Laguiche Group (Opinaca Subprovince) are folded and overturned to the SE, whereas the southern Opinaca basin underwent a complex polyphase NS and ESE folding.

The metavolcanic rocks of the Yasinski Group are separated from the Laguiche Group metasediments by a narrow NE-oriented thrust. A dextral, NW-SE shear zone to the west affected the Langelier basement rocks as well as the Laguiche Group metasediments and La Grande Subprovince metavolcanic rocks.

The earliest tectonism affected the gneiss du Complexe de Langelier Complex tonalite gneiss before the extrusion of the volcanic assemblages. A second deformation phase involved the volcanosedimentary rocks (Yasinski and Lac Guyer groups) with substantial transport from the NW to the SE. This event resulted in tectonic imbrications and kilometer-scale folding. The third tectonic phase occurred after the intrusion of the Duncan suite intrusives and generated a strong

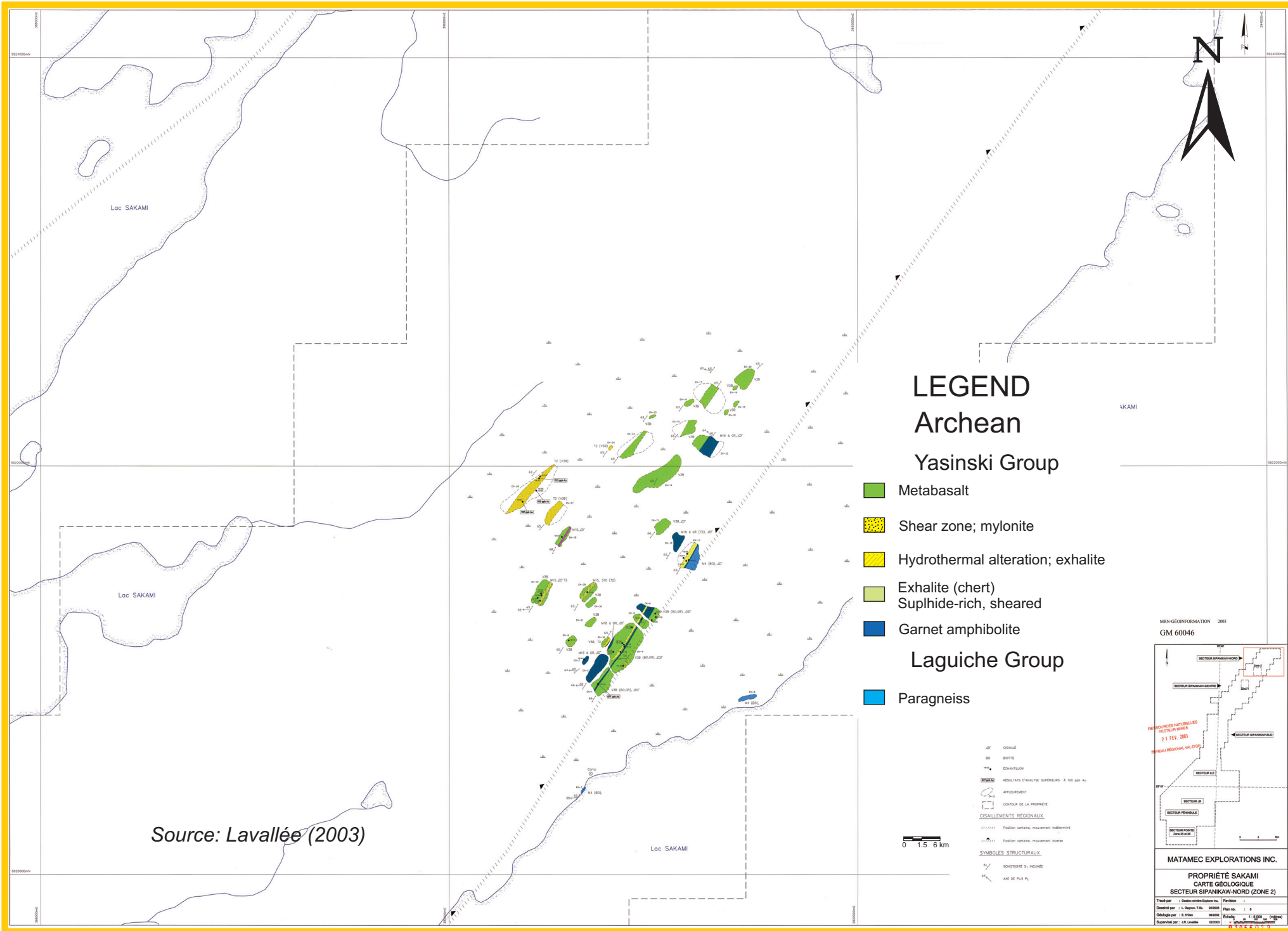


Figure 10. Geology of the Sapanikaw north sector located in the northeastern segment of Sakami property.



foliation and thrusting of the volcanosedimentary assemblages on the Laguiche metasediments. A late polyphase deformation, perhaps related to the intrusion of granitic plutons in the Opinaca basin, is associated with a system of dextral NE-NW-oriented shears

### *7.5- Mineralization*

There are no "mineralized bodies" *per se* within the confines of the Sakami property. There are a few areas in the Île and Sipanikaw-North sectors (Figure 5) where grab rock sampling yielded some interesting gold values. In the Île sector, 18 rock samples produced gold concentrations > 100 ppb, with one sample having 5.17 g/t. The latter was sampled from an EW-oriented, 1 m-wide shear zone containing 5-6% pyrite-pyrrhotite within a paragneiss.

In the Sipanikaw north sector, two interesting zones were recognized by Lavallée (2003; GM60046). The first one is a mylonitized and sheared zone containing 6-7% pyrite-pyrrhotite with traces of chalcopyrite. Best gold values obtained were: 639, 115 and 857 ppb respectively. The second zone located 4.5 km north is a quartz vein containing pyrite and chalcopyrite and yielding 757 ppb Au. Other samples collected from the same zone and associated with a mylonitized corridor showed a maximum gold content of 723 ppb.

## **ITEM 8 DEPOSIT TYPE**

Gold deposit types related to the Sakami property have been called mesothermal gold, metamorphic gold, gold-only, lode gold, shear-zone hosted, structurally-controlled deposits or orogenic gold. In the Abitibi Subprovince, greenstone-hosted quartz-carbonate vein deposits are a subtype of lode gold deposits.

The Au-rich veins in greenstone-hosted quartz-carbonate vein deposits are hosted by a wide variety of host rock types; mafic and ultramafic volcanic rocks and competent iron-rich differentiated tholeiitic gabbroic sills and granitoid intrusions (e.g. TTG) are common hosts. Typically, there is a strong structural control of the gold deposits and orebodies at all scales. The morphology can be highly variable, including: 1) brittle faults

to ductile shear zones, 2) extensional fractures, stockworks and breccias, and 3), fold hinges (Hodgson, 1989). The orebodies can consist dominantly of altered host rock with disseminated mineralization or of fissure-filled mineralization. Individual quartz-carbonate vein thickness varies from a few centimeters up to 5 m, and their length varies from 10 up to 1000 m. The vertical extent of the orebodies is commonly greater than 1 km and reaches 2.5 km in a few cases.

The gold-bearing shear zones and faults associated with this deposit type are mainly compressional and they commonly display a complex geometry with anastomosing and/or conjugate arrays (Robert et al., 1994; Robert and Poulsen, 2001). Due to the complexity of the geological and structural setting and the influence of strength anisotropy and competency contrasts, the geometry of vein networks varies from simple (e.g. Silidor deposit, Flavrian tonalite, Abitibi Greenstone Belt), to fairly complex with multiple orientations of anastomosing and/or conjugate sets of veins, breccias, stockworks, and associated structures (Dubé et al., 1989; Robert et al., 1994; Robert and Poulsen, 2001).

Veins in the orogenic gold deposits are dominated by quartz with subsidiary carbonate and sulphide minerals, and less abundantly, albite, chlorite, white mica (fuchsite in ultramafic host rocks), tourmaline, and scheelite. Carbonate minerals consist of calcite, dolomite and ankerite. Gold occurs in the veins and in adjacent wallrocks and is usually intimately associated with sulphide minerals, including pyrite, pyrrhotite, chalcopyrite, galena, sphalerite, and arsenopyrite. In volcano-plutonic settings, pyrite and pyrrhotite are the most common sulphide minerals in greenschist and amphibolite grade host rocks.

Hydrothermal wallrock alteration in orogenic gold deposits is developed in a zoned pattern with a progression from proximal to distal assemblages. The main alteration products of the wallrocks include: 1) carbonate minerals (calcite, dolomite, ankerite, in some cases siderite and magnesite), 2) sulphide minerals (generally pyrite, pyrrhotite or arsenopyrite), 3) alkali-rich silicate minerals (sericite, fuchsite, albite, and less commonly, K-feldspar, biotite, paragonite), 4) chlorite and 5), quartz. Carbonatization, sulphidation and alkali-metasomatism of the wallrocks reflect the addition of variable amounts of CO<sub>2</sub>, S, K,

Na, H<sub>2</sub>O, and LILE during mineralization.

Greenstone-hosted quartz-carbonate-vein deposits are typically distributed along crustal-scale fault zones (Kerrich et al., 2000). These are the main hydrothermal pathways towards higher crustal levels. However, the deposits are spatially and genetically associated with second- and third-order compressional reverse-oblique to oblique brittle-ductile high-angle shears and high strain zones, which are commonly located within 5 km of the first order fault and are best developed in its hanging wall (Robert, 1990). The structures hosting the gold deposits (shear zones, faults, extensional veins, and breccias) are typically discordant with respect to the stratigraphic layering of the host rocks, but in some cases they can be parallel to bedding planes and fold hinges or intrusive contacts.

Orogenic gold deposits were in general formed from moderately reduced fluids with a nearly neutral to weakly alkaline pH at all crustal levels (Mickucki, 1998). The ore-forming fluid is typically a  $1.5 \pm 0.5$  kb,  $350^\circ \pm 50^\circ\text{C}$ , low-salinity H<sub>2</sub>O-CO<sub>2</sub>  $\pm$  CH<sub>4</sub>  $\pm$  N<sub>2</sub> fluid that transported gold as a reduced sulphur complex (Groves et al., 2003). The fluids maintained approximate thermal equilibrium with the rocks through which they circulated, but their chemical composition was progressively modified through fluid-wallrock interaction and/or mineral precipitation during their ascent. The main complex responsible for gold transport in orogenic gold deposits is Au(HS)<sub>2</sub> (Mickucki, 1998).

A number of genetic models have been proposed. The main models are : 1) granulitization of the lower crust due to CO<sub>2</sub>-enriched fluids from the mantle accompanied by felsic magmatism (Hodgson and Hamilton, 1989), 2) magmatic fluids exsolved from tonalite - trondhjemite -granodioritic intrusions (Burrows and Spooner, 1987), 3) fluids produced by metamorphic processes (e.g. Kontak et al., 1990; Kerrich and Cassidy, 1994) and 4), deep circulation of meteoric water (Nesbitt et al., 1986; Boiron et al., 1996). Some authors have ascribed a deep origin to such deposits, suggesting a syn-metamorphic origin (e.g. Neumayr et al., 1993), therefore supporting a crustal continuum model for the orogenic gold deposits (Groves et al., 1998). In contrast, other authors favor a shallow origin for such deposits, subsequently overprinted by deformation and regional metamorphism at deeper

structural levels (Penczcak and Mason, 1997). Hutchinson (1993) has proposed a multi-stage, multi-process genetic model in which gold is recycled from pre-enriched source rocks and early formed typically sub-economic gold concentrations. Hodgson (1993) also proposed a multi-stage model in which gold was, at least in part, recycled from district-scale reservoirs that resulted from earlier increments of gold enrichment.

#### **ITEM 9 EXPLORATION**

No exploration was carried out by Genius Properties Ltd. on the Sakami property.

#### **ITEM 10 DRILLING**

No drilling was performed during the course of this study.

#### **ITEM 11 SAMPLE PREPARATION, ANALYSES AND SECURITY**

Rock or humus samples were not collected by Genius Properties Ltd. on the Sakami property.

#### **ITEM 12 DATA VERIFICATION**

There is no data verification.

#### **ITEM 13 MINERAL PROCESSING AND METALLURGICAL TESTING**

There was no mineral processing or metallurgical testing during the course of this study.

#### **ITEM 14 MINERAL RESOURCES ESTIMATE**

There was no mineral resource estimate during the course of this study.

#### **ITEM 23 ADJACENT PROPERTIES**

There are no adjacent properties.

## **ITEM 24 OTHER RELEVANT DATA AND INFORMATION**

There is no other relevant data and information.

## **ITEM 25 INTERPRETATION AND CONCLUSIONS**

A large segment of the Sakami property straddles the contact between the Opinaca metasedimentary Subprovince and the La Grande volcanoplutonic Subprovince. This boundary has been sporadically explored over the last decade leading to the discovery of significant numbers of gold showings related to sulphide-rich quartz veins in iron formations and shear zones. There is still a vast expanse of terrane to explore notably in the northeast segment of the property where the mapping and rock sampling were sporadic at best (see: Lavallée, 2003: GM60046). With this promising geological environment, it is expected that further prospecting and geological mapping, along with geochemistry and geophysical surveys could identify drilling targets.

The Sakami property is located in the James Bay area of the Province of Quebec overlying the Sakami Lake and consists three blocks of 146 non-continuous mineral claims totalling 7,513 ha. The property is 100% owned by Genius Properties Ltd. Access to the property is via the Trans-Taiga road by truck and on Sakami Lake by boat to reach summer fly camps. The property straddles the structural contact between the Opinaca and La Grande subprovinces. The La Grande subprovince is an EW-oriented Archean volcanoplutonic assemblage composed of an ancient tonalitic basement, several westward-younging volcano-sedimentary greenstone belts and of multiple ultramafic to felsic intrusions (Goutier et al., 2002). The basement complex is in structural contact with younger supracrustal sequences composing the Yasinski group. The former is constituted of tholeiitic basalts, feldspathic wackes, magnetite-bearing iron formations andesitic and felsic pyroclastites of calco-alkaline affinity (Goutier et al., 2001a, b, 2002).

The southeastern Sakami property is dominated by folded and greenschist to amphibolite metamorphosed mafic volcanic rocks. These are intruded by a hornblende-biotite tonalite pluton of the Duncan Intrusive Suite (Goutier et al., 2000). The northeastern segment of the property straddles the sheared/thrusted and deformed contact between the la Grande (Yasinski Group) and Opinaca (Laguiche Group) subprovinces. The Yasinski Group exposes principally massive to pillowed metabasaltic rocks injected by gabbroic sills and bodies. Layers and bands of garnet amphibolites, ultramafic rocks, felsic schists, exhalites and sulphide-rich cherts are observed near mylonite and shear zones. The Sakami property does not expose load gold-type bodies but displays diverse lithologies showing signs of alteration and/or mineralization (Au =1 to 5 g/t) principally associated with mylonite/sheared zones or iron formations.

Abalor Minerals Inc. performed exploration work in during the 2011 and 2012 summer seasons which initially consisted of putting up gridlines in the southwestern and northeastern (Sipanikaw) sectors of the property. Grab rock sampling along the Sipanikaw gridlines yielded several lithological types, the most interesting being sericitized, oxidized or brecciated volcanic rocks and schists and containing sulphide. Of the rock samples collected, eighteen (9 %) display gold values > 100 ppb, with three rock specimen with significant concentrations (0.90 to 1.42 g/t Au). A humus sampling campaign was conducted on the southwestern grid. Gold assay results indicated 11 samples (2 %) with concentrations greater than 0.020 g/t (0.020 to 0.552 g/t), with three humus specimen having significant concentrations (0.102 to 0.552 g/t Au). Overall, the geochemical contour maps, define two “anomalous zones” which are characterized by clusters of gold values > 0.020 g/t Au.

In the Sipanikaw sector, rock samples with values >100 ppb occurred principally in sheared or mylonitized hydrothermally altered (pyritized, sericitized) metavolcanic rocks or in iron formations. The latter are gold-bearing in certain stratigraphic layers of the Yasinski Group and there is an 8 km long band of iron formation within the Yasinski Group near the contact with the main thrust/mylonite corridor. The author recommends performing a magnetic survey on the gridline which will easily identified the high magnetic signature of the iron formation and the trace of various shear zones. In the southeastern part of the Sakami property, the author proposes a ground-based mag survey along the refurbished gridlines used for the humus sampling

campaign. Both surveys aim to unearth drilling targets. If Phase I of exploration is successful (\$361,342), Genius Properties should consider implementing a 1,500 m drilling campaign to test these targets. The drilling cost is estimated at \$455,070.

There are certain risks and uncertainties that could be expected to affect the reliability or confidence in the project's potential economic viability. One is the prevailing conditions of the gold market manifesting enormous volatility and a downward price trend since 2014. These factors will have a major incidence on deciding whether or not to raise capital to further develop the property. Another risk factor is the ability of the company to successfully apply its expertise and knowledge in defining a viable gold deposit, mainly through successive drilling campaigns. There is no guarantee of the successful outcome of these future campaigns.

## **ITEM 26 RECOMMENDATIONS**

Significant gold mineralized samples with values greater than 100 ppb occurred in the northeastern Sipanikaw sectors of the property principally in sheared or mylonitized hydrothermally altered (pyritized, sericitized ) metavolcanic rocks and in iron formations. The MRNQ geological compilation map indicates the presence of a stratigraphically bounded, > 8 km long band of iron formation within the Yasinski Group near the contact with the main shear/mylonite corridor. The iron formations are gold-bearing in certain stratigraphic layers of the Yasinski Group (ex: Lavallée, 2003; GM60046; Leclerc, 2005, 2006: GM61634 and 62497). The author recommends performing a magnetic survey on the former gridlines which will easily identified the high magnetic signature of the iron formation and the trace of various shear zones present in the area. If successful, Genius Properties may consider doing some stripping to unearth the area underlain to conduct some detail rock sampling.

In the southeastern section of the property, the anomalous A and B zones, defined by humus sample analyses, may or may not be related to gold mineralization at depth. Nonetheless, if further exploration work is considered, the author recommends a ground-based mag survey along the refurbished gridlines. This cost-effective survey could be completed in conjunction with an IP survey depending on the available exploration funds. The principal objective of these surveys

is twofold: 1) define the imprint of the major structures present and 2), find conductors associated with sulphide mineralization.

This campaign would constitute Phase I of an exploration campaign which ultimate aim is to produce drilling targets at a cost of \$361,342. If successful, Genius Properties should consider implementing a 1,500 m drilling campaign to test these targets. The drilling cost is estimated at \$455,070.

26.1-Budget Breakdown

<b>SAKAMI PROPERTY</b>	
<b>(PHASE I)</b>	
<b>LINE CUTTING</b>	
Refurbishing southern and northern grid	\$5,000
Camp: Lodging and food (4 men line cutting crew x 10 days)	\$8,000
Hand-held and satellite radio: 10 days x \$35/day	\$350
Mob/Demob	\$2,000
<b>GROUND BASED GEOPHYSICAL SURVEYS</b>	<b>\$50,000</b>
Magnetic: 145 km x \$300/km	\$43,500
IP/Resistivity: 20 km x \$1,200/km	\$24,000
Camp: Lodging and food (4 men crew x 140 days)	\$112,000
Hand-held and satellite radio:20 days x \$35/day	\$28,000
Mob/Demob	\$5,000
<b>TRANSPORT</b>	<b>\$10,000</b>
<b>GEOLOGICAL REPORTS</b>	<b>\$25,000</b>
<b>Subtotal</b>	<b>\$312,850</b>
Contingency (10%)	\$31,285
<b>Total before taxes</b>	<b>\$344,135</b>
GST (5%)	\$17,207
<b>Grand Total</b>	<b>\$361,342</b>

26.1-Budget Breakdown (Ctnd.)

<b>SAKAMI PROPERTY</b>	
<b>(PHASE II)</b>	
<b>DRILLING</b>	
1500 m (NQ) X \$85/m	\$127,500
Mobilisation-demobilisation	\$20,000
Drill moving, water set-up	\$5,000
Permits	\$1,000
Analyses: 4880 samples X \$50/sample	\$25,000
Supervision: 1 geologist :\$600/day X 30 days	\$18,000
2 technicians: \$300/day X 30 days	\$18,000
1 camp manager: \$450/day x 50 days	\$22,500
1 cook: \$400/day x 30 days	\$12,000
Core splitter, survey instrument, sample bags, etc..	\$10,000
Administration/supervision	\$10,000
<b>CAMP: LODGING AND MEALS</b>	<b>\$40,000</b>
<b>SUPPLIES CAMP</b>	<b>\$15,000</b>
<b>EQUIPMENT</b>	
Truck location, ATV	\$50,000
<b>GEOLOGICAL REPORT</b>	<b>\$20,000</b>
<b>Subtotal</b>	<b>\$394,000</b>
Contingency (10%)	\$39,400
<b>Total before taxes</b>	<b>\$433,400</b>
GST (5%)	\$21,670
<b>Grand Total</b>	<b>\$455,070</b>

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## **Appendix 1**

Appendix 1. CDC claims of the Sakami property owned by Genius Properties Ltd.

CDC #	Expiration Date	Area (Ha)	Owner
2312355	9/18/2017	51.33	Genius Properties Ltd. (100%)
2312356	9/18/2017	51.33	Genius Properties Ltd. (100%)
2312357	9/18/2017	51.33	Genius Properties Ltd. (100%)
2312358	9/18/2017	51.33	Genius Properties Ltd. (100%)
2312359	9/18/2017	51.33	Genius Properties Ltd. (100%)
2312849	9/21/2017	51.32	Genius Properties Ltd. (100%)
2312850	9/21/2017	51.32	Genius Properties Ltd. (100%)
2312851	9/21/2017	51.32	Genius Properties Ltd. (100%)
2312852	9/21/2017	51.32	Genius Properties Ltd. (100%)
2316099	10/4/2017	51.41	Genius Properties Ltd. (100%)
2316101	10/4/2017	51.41	Genius Properties Ltd. (100%)
2316110	10/4/2017	51.40	Genius Properties Ltd. (100%)
2316111	10/4/2017	51.40	Genius Properties Ltd. (100%)
2316112	10/4/2017	51.40	Genius Properties Ltd. (100%)
2316113	10/4/2017	51.40	Genius Properties Ltd. (100%)
2316120	10/4/2017	51.39	Genius Properties Ltd. (100%)
2316121	10/4/2017	51.39	Genius Properties Ltd. (100%)
2316122	10/4/2017	51.39	Genius Properties Ltd. (100%)
2316123	10/4/2017	51.39	Genius Properties Ltd. (100%)
2316130	10/4/2017	51.38	Genius Properties Ltd. (100%)
2316131	10/4/2017	51.38	Genius Properties Ltd. (100%)
2316138	10/4/2017	51.37	Genius Properties Ltd. (100%)
2316139	10/4/2017	51.37	Genius Properties Ltd. (100%)
2316140	10/4/2017	51.37	Genius Properties Ltd. (100%)
2316141	10/4/2017	51.37	Genius Properties Ltd. (100%)
2316142	10/4/2017	51.37	Genius Properties Ltd. (100%)
2316149	10/4/2017	51.36	Genius Properties Ltd. (100%)
2316150	10/4/2017	51.36	Genius Properties Ltd. (100%)
2316151	10/4/2017	51.36	Genius Properties Ltd. (100%)
2316157	10/4/2017	51.35	Genius Properties Ltd. (100%)
2316158	10/4/2017	51.35	Genius Properties Ltd. (100%)
2316159	10/4/2017	51.35	Genius Properties Ltd. (100%)
2316160	10/4/2017	51.35	Genius Properties Ltd. (100%)
2316161	10/4/2017	51.35	Genius Properties Ltd. (100%)
2316167	10/4/2017	51.34	Genius Properties Ltd. (100%)
2316168	10/4/2017	51.34	Genius Properties Ltd. (100%)
2316169	10/4/2017	51.34	Genius Properties Ltd. (100%)
2316170	10/4/2017	51.34	Genius Properties Ltd. (100%)
2316171	10/4/2017	51.34	Genius Properties Ltd. (100%)
2399486	2/11/2018	51.43	Genius Properties Ltd. (100%)
2399487	2/11/2018	51.43	Genius Properties Ltd. (100%)
2399488	2/11/2018	51.43	Genius Properties Ltd. (100%)
2399489	2/11/2018	51.43	Genius Properties Ltd. (100%)
2399490	2/11/2018	51.42	Genius Properties Ltd. (100%)
2399491	2/11/2018	51.41	Genius Properties Ltd. (100%)
2399492	2/11/2018	51.41	Genius Properties Ltd. (100%)
2461143	9/5/2018	51.56	Genius Properties Ltd. (100%)
2461144	9/5/2018	51.56	Genius Properties Ltd. (100%)
2461145	9/5/2018	51.56	Genius Properties Ltd. (100%)
2461146	9/5/2018	51.56	Genius Properties Ltd. (100%)
2461147	9/5/2018	51.55	Genius Properties Ltd. (100%)
2461148	9/5/2018	51.55	Genius Properties Ltd. (100%)
2461149	9/5/2018	51.55	Genius Properties Ltd. (100%)
2461150	9/5/2018	51.55	Genius Properties Ltd. (100%)
2461151	9/5/2018	51.55	Genius Properties Ltd. (100%)
2461152	9/5/2018	51.55	Genius Properties Ltd. (100%)
2461153	9/5/2018	51.54	Genius Properties Ltd. (100%)
2461154	9/5/2018	51.54	Genius Properties Ltd. (100%)
2461155	9/5/2018	51.54	Genius Properties Ltd. (100%)
2461156	9/5/2018	51.54	Genius Properties Ltd. (100%)
2461157	9/5/2018	51.54	Genius Properties Ltd. (100%)
2461158	9/5/2018	51.54	Genius Properties Ltd. (100%)
2461159	9/5/2018	51.53	Genius Properties Ltd. (100%)
2461160	9/5/2018	51.53	Genius Properties Ltd. (100%)
2461161	9/5/2018	51.53	Genius Properties Ltd. (100%)

Appendix 1. CDC claims of the Sakami property owned by Genius Properties Ltd.

CDC #	Expiration Date	Area (Ha)	Owner
2461162	9/5/2018	51.53	Genius Properties Ltd. (100%)
2461163	9/5/2018	51.52	Genius Properties Ltd. (100%)
2461164	9/5/2018	51.52	Genius Properties Ltd. (100%)
2461165	9/5/2018	51.55	Genius Properties Ltd. (100%)
2461166	9/5/2018	51.55	Genius Properties Ltd. (100%)
2461167	9/5/2018	51.54	Genius Properties Ltd. (100%)
2461168	9/5/2018	51.53	Genius Properties Ltd. (100%)
2461169	9/5/2018	51.53	Genius Properties Ltd. (100%)
2461170	9/5/2018	51.44	Genius Properties Ltd. (100%)
2461171	9/5/2018	51.38	Genius Properties Ltd. (100%)
2461172	9/5/2018	51.31	Genius Properties Ltd. (100%)
2461173	9/5/2018	51.31	Genius Properties Ltd. (100%)
2461174	9/5/2018	51.30	Genius Properties Ltd. (100%)
2461175	9/5/2018	51.30	Genius Properties Ltd. (100%)
2461176	9/5/2018	51.30	Genius Properties Ltd. (100%)
2461177	9/5/2018	51.29	Genius Properties Ltd. (100%)
2461178	9/5/2018	51.29	Genius Properties Ltd. (100%)
2461179	9/5/2018	51.29	Genius Properties Ltd. (100%)
2461180	9/5/2018	51.28	Genius Properties Ltd. (100%)
2461181	9/5/2018	51.28	Genius Properties Ltd. (100%)
2461182	9/5/2018	51.28	Genius Properties Ltd. (100%)
2461183	9/5/2018	51.27	Genius Properties Ltd. (100%)
2461184	9/5/2018	51.26	Genius Properties Ltd. (100%)
2461185	9/5/2018	51.26	Genius Properties Ltd. (100%)
2461186	9/5/2018	51.26	Genius Properties Ltd. (100%)
2461187	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461188	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461189	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461190	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461191	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461192	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461193	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461194	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461195	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461196	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461197	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461198	9/5/2018	51.24	Genius Properties Ltd. (100%)
2461199	9/5/2018	51.24	Genius Properties Ltd. (100%)
2461200	9/5/2018	51.24	Genius Properties Ltd. (100%)
2461201	9/5/2018	51.24	Genius Properties Ltd. (100%)
2461202	9/5/2018	51.23	Genius Properties Ltd. (100%)
2461203	9/5/2018	51.23	Genius Properties Ltd. (100%)
2461204	9/5/2018	51.23	Genius Properties Ltd. (100%)
2461205	9/5/2018	51.23	Genius Properties Ltd. (100%)
2461206	9/5/2018	51.23	Genius Properties Ltd. (100%)
2461207	9/5/2018	51.23	Genius Properties Ltd. (100%)
2461208	9/5/2018	51.23	Genius Properties Ltd. (100%)
2461209	9/5/2018	51.22	Genius Properties Ltd. (100%)
2461210	9/5/2018	51.22	Genius Properties Ltd. (100%)
2461211	9/5/2018	51.22	Genius Properties Ltd. (100%)
2461212	9/5/2018	51.22	Genius Properties Ltd. (100%)
2461213	9/5/2018	51.22	Genius Properties Ltd. (100%)
2461214	9/5/2018	51.25	Genius Properties Ltd. (100%)
2461215	9/5/2018	51.22	Genius Properties Ltd. (100%)
2461216	9/5/2018	51.22	Genius Properties Ltd. (100%)
2461217	9/5/2018	51.22	Genius Properties Ltd. (100%)
2461218	9/5/2018	51.21	Genius Properties Ltd. (100%)
2461219	9/5/2018	51.21	Genius Properties Ltd. (100%)
2461220	9/5/2018	51.21	Genius Properties Ltd. (100%)
2461221	9/5/2018	51.21	Genius Properties Ltd. (100%)
2472327	1/8/2019	51.45	Genius Properties Ltd. (100%)
2472328	1/8/2019	51.45	Genius Properties Ltd. (100%)
2472329	1/8/2019	51.44	Genius Properties Ltd. (100%)